

2004

Globalization, ecotourism, and development in the Monte Verde Zone, Costa Rica

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Globalization, Ecotourism, And Development In The Monte Verde Zone, Costa Rica

by

Edgar Allan Amador

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
Department of Anthropology
College of Arts and Sciences
University of South Florida

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Date of Approval:
November 16, 2004

Keywords: tourism, central america, survey, demography, anthropology

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Dedication

This thesis is dedicated to the most important people in my life: my wife, Jennifer, my mother, Gioconda, and my brothers, J. Alejandro and Alvaro.

Acknowledgements

I want to thank my wife, Jennifer, for her criticism, patience, and support during the writing of this thesis. I also thank my mother for her self-sacrifice, so I could get this far. I want to also thank my major professor, Dr. Trevor Purcell, who gave me the opportunity to work with him on this project. I must also thank the Globalization Research Center, especially the Center's Director, Dr. Mark Amen, for offering me this two year paid internship/research position and being a part of my committee. I would also like to thank Dr. Kevin Yelvington for his patience and support as my third committee member. Finally, I thank the Latino Graduate Fellowship folks, especially Rod Hale, for giving me financial support through this process.

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Globalization, Ecotourism, and Development in the Monte Verde Zone, Costa Rica

Edgar Allan Amador

ABSTRACT

Ecotourism has been promoted globally as a model for sustainable development because it simultaneously benefits the environment and the residents of the given destination. However, many conservationists have questioned the long term sustainability of ecotourism as it is difficult to mitigate the impact of even low levels of tourism on a particular ecosystem. Further, social scientists including anthropologists have similarly questioned whether most residents of a particular destination actually benefit significantly from the alternative tourism economy.

The Globalization Research Center in cooperation with the Monteverde Institute in the Monte Verde Zone, Costa Rica, is undertaking a longitudinal study – dubbed the Triangulation Study – to understand the effects that development through ecotourism has on human and natural systems. In order to collect preliminary data, the Globalization Research Center funded the Development Survey which was designed to collect demographic data from a representative stratified random sample of household from nine communities in the Monte Verde Zone. Basic descriptive information was also collected for all of the businesses in the area that would agree to participate. The data collected showed that there is a significant difference in the extent that the nine communities in the

Monte Verde Zone are involved in and perhaps benefiting from ecotourism despite the fact that their opinions about ecotourism are mostly positive. The communities located on the main road to the Monteverde Cloud Forest Preserve have demographic statistics that are significantly different from communities that are off the main road, and all communities are significantly different from the Monteverde community. Further, the ecotouristic businesses are located in these road proximate communities. Like the ecotourism literature predicted, the majority of the businesses are small and locally owned. Further study that carefully looks at the differences between those communities closest to the road and those furthest away is recommended. Perhaps a repetition of the Development Survey after a period of time would help elucidate changes in the Zone.

Chapter One

Introduction

Introduction

The Monte Verde Zone is located up in the *Cordillera Tilaran*, a central Costa Rican mountain chain, approximately an hour and forty five minutes up a winding dirt road that branches off the Pan-American Highway. Within the Zone lies the community of Monteverde which is an international ecotourist destination because of its beautiful cloud forests that are home to an impressive array of animals and plants, including many species of exotic birds. These pristine forests with their biological diversity have created a vibrant and growing ecotourist industry in the Monteverde community and the Monte Verde Zone. But, this ecotourism economy is supplanting the pre-existing agricultural economy. Additionally, development resulting from ecotourism is increasing demands on natural resources, especially water, forests, and land, and is placing greater burdens on sanitation and health care delivery systems. Also, the potential increase in exposure to infectious/communicable diseases created by the increase in tourism, rapid population growth, and increased population density may place a yet unknown health burden on the local population.

Within the Monte Verde Zone, the communities of Monteverde, Cerro Plano, and Santa Elena currently have the largest populations and concentration of hotels, restaurants, and other service related businesses that result from development related to

tourism. In order to profit from the current tourism boom, local people are transforming their former economic enterprises. Some cattle ranches, for example, have been reinvented as ecological farms where cattle are no longer kept. In these ranches, for a fee, tourists are allowed to hike the trails within the property. New attractions that siphon off tourists interested in wildlife on their way to the Cloud Forests are appearing as well, including a *ranario* (frog and toad zoo) and a serpentarium.

The economic and political transformation, however, is not occurring equally in all communities within the Zone. For example, the population increase, particularly in Cerro Plano, Santa Elena, and Monteverde, is necessitating changes in delivery of government services such as health care facilities. But some communities in the Zone fall within the boundaries of Guanacaste, an entirely different province. These communities, for legal reasons, do not benefit from any of the new political reorganization as only those that live within designated political boundaries will have access to these new facilities.

Global forces are at work changing and shaping the community of Monteverde and the Monte Verde Zone. The growth in tourism is partially the result of efforts made by conservationists locally, nationally, and internationally, partially the result of development strategies pursued by the Costa Rican government, partially the results of Costa Rica's place in the world economy (which impacts their development strategy), and partially the result of the growing international leisure class (the tourists) who seek out pristine natural destinations. Travel and, therefore, tourism to Monteverde is facilitated by improved technologies that compress space and time. Such technologies include better roads and automobiles, better telephone and cell phone services, better

computers, and improved internet capabilities. And yet, what is the net effect of these forces on local communities? How can a rural community manage the rapid change and growth that may result as they integrate into the global economy through supposed equitable development strategies like ecotourism? Is ecotourism really a manageable and sustainable development strategy? How does development resulting from ecotourism affect the lives of residents? My internship and resulting thesis begin to address a portion of these questions under the structure developed by the Globalization Research Center and the Monteverde Institute. The collaborative longitudinal research in which these two institutions are engaged necessitated a preliminary study to begin to explore these issues and to generate unavailable baseline data. Therefore, the question that I was recruited to help answer during my internship research and resulting thesis is: *How has ecotourism affected the rate, character and patterns of development, and what are the effects of such development on biodiversity and natural capital, community health, nutrition and rates of infectious diseases, and local culture, knowledge, and political systems?*

From this broad, interdisciplinary, and inclusive question, smaller and more manageable questions emerged so that different researchers on the interdisciplinary team could engage the particular dimension of the research that utilized their respective specialties. Working on the Development team, my research question became: *What is the role of the various segments of the Monteverde population (community, occupational, locals, immigrants, business, etc.) in the overall development of the local economy and social structure?*

Internship Overview

My internship consisted of two years of employment (2001-2003) at the USF GRC, where I assisted with the initial phases of the Triangulation Study. Before my initial employment, the University of South Florida's Globalization Research Center (USF GRC) had already entered into a relationship with the Monteverde Institute (MVI). The USF GRC and MVI formed a partnership in order to conduct multi-disciplinary collaborative research that attempted to analyze the impact that the rapid development of the Monte Verde Zone resulting from ecotourism is having on human and natural systems. This collaborative multi-disciplinary research project was dubbed the Triangulation Study. The USF GRC and MVI included in their planning several Monteverde community organizations as well as the Institute of Research in Economic Science at the University of Costa Rica. The project's initial steps included the collection of available information and, eventually, the drafting and administering of a largely demographic survey designed to provide some baseline data for a more ethnographic longitudinal study. My duties initially consisted of doing preliminary research, both archival and on the ground, to amass all available information for this study. Once the types of data available were identified and collected, the research team of which I was a part planned and conducted a baseline demographic survey of the nine communities that comprise the Monte Verde Zone to fill in the gaps of missing information. I was subsequently responsible for preparing an analysis using the data collected that described general demographic characteristics of the Monte Verde Zone and compared the nine communities. Particular importance was placed on collecting the data for the baseline

survey as the road to Monteverde was being paved, making the ecotouristic destination more accessible and potentially accelerating the growth of the region significantly.

Purpose of Internship

The purpose of this internship was to conduct a baseline survey for the Triangulation Study which had practical value to the USF GRC and MVI, as well as other members of the Mont Verde Zone community. The USF GRC intended to use the information to apply for grants, plan, and conduct the longitudinal study. MVI intended to make the data publicly available, as many stakeholders in the community had an interest in seeing the data. Additionally, MVI wanted to use the analysis of the data in presentations to the community on the general state of development resulting from ecotourism in the Monte Verde Zone.

Globalization Research Center

As stated on its website, the USF Globalization Research Center (USF GRC) was created to study the phenomenon of economic, social, and cultural globalization. The USF GRC has chosen to focus its research efforts on the effects of and responses to globalization in the overlapping areas of health, water, and development, with a geographic concentration on Latin America and the Caribbean. As a part of its mission within a four university Globalization Consortium, composed of USF, UCLA, University of Hawaii and George Washington University, the USF GRC selected a core project that investigates the inter-relationships between biodiversity, water, health and development within a global perspective. This core project of the USF GRC is the previously mentioned *Triangulation Study*. During the period of my employment the USF GRC consisted of a center director, Dr. Mark Amen, and three research coordinators who were

responsible for (among other things) reviewing research proposals that pertain to their respective area of expertise. Dr. Linda Whiteford was the health coordinator, Dr. Mark Stewart was the water resource management coordinator, and Dr. Trevor Purcell was the development coordinator. Within the GRC, my position during both years of my employment (2001-2003) was that of graduate research assistant to the development coordinator.

The Monteverde Institute

The Monteverde Institute (MVI) is a non-profit association with public utility status located in Monteverde, Costa Rica, one of the world's most renowned ecotourist destinations. The Institute was started by members of the Monteverde community, which has a large Quaker population, and, according to its mission statement, is dedicated to "peace, justice, knowledge and the vision of a sustainable future." Initially, this grassroots non-for-profit organization was primarily focused on studying the biodiversity of the Monteverde region as well as promoting and managing grassroots conservation efforts. However, the Monteverde Institute had become increasingly interested and engaged in social issues that were important to the human inhabitants of the Monte Verde Zone, particularly as the population and the development of the area increased. MVI derives its money from its collaboration with foreign universities and runs a series of field courses mostly in tropical biology but also in sustainable development and community health and globalization. My contact at MVI was the research coordinator C. Sophia Klempner, MPH, who was hired in part to help coordinate the Development Survey at the local level.

Summary of Internship Activities

My work on this project began during my initial employment in the summer of 2001 when another of the center's graduate assistants and I were sent to Costa Rica for six weeks partly to participate and assist in a globalization and health field methods course run by MVI in collaboration with the USF GRC but also to collect any archival information available, conduct informal interviews with community stakeholders, and begin to make contacts with the different groups within the communities. Subsequently, it was decided by the USF GRC and MVI that conducting a baseline survey to obtain some basic information would be of use to both the USF GRC and MVI. The task of developing and administering the survey was placed on the development team of the USF GRC, which consisted of the development coordinator, Dr. Trevor Purcell, and the graduate assistant for the development coordinator, myself. Dr. Purcell and I decided to call the survey the Development Survey.

Many of the community and political organizations in the Monte Verde Zone were interested in and became involved with the Development Survey. Throughout our site visits, we sought input from these organizations through continuing conversations/interviews with key individuals in the community, including the Director of the Monteverde Institute and numerous members of his staff, leaders and members the *Consejo de Distrito* (Council of Districts - a local governance body), the *Camara de Turismo* (Tourist Chamber), *Asociación de Desarrollo* (Development Association), and, at the national level, the director of the Economic Science Research Institute at the University of Costa Rica.

While the broader Triangulation Study aims to examine the relationship between

human systems, natural systems, and ecotourism in Monteverde, the Development Survey consisted of two locally administered structured surveys conducted by native surveyors: (1) a household survey intended primarily to collect data on the demographic dynamics, social organizational patterns, opinions, and economic activities of a representative sample of residents of the different communities in the Monte Verde Zone; and (2) a business survey intended to provide baseline data for the construction of a profile of the ecotourism sector in order to begin to understand its impact on the overall development of the area.

The development survey was conducted in late August thru September 2002. Our major concern at the GRC was not having a person on the ground during the actual survey. The Monteverde Institute and the GRC therefore hired a research coordinator, C. Sophia Klempler, MPH, to help facilitate the research and the processing of the data. Klempler was also employed by MVI and had other duties that pertain to that employment. Dr. Purcell and I traveled to Costa Rica to train twelve native surveyors to collect the data and finalize procedures with the research coordinator. During our training week, we briefed the native surveyors on the goals of the general Triangulation Study and the Development Survey, survey methodology, ethnographic methodology, and research ethics. Upon completion of the training, the native surveyors began administering the two surveys in the nine communities under the supervision of the research coordinator. Once the data was collected, the research coordinator began entering the data into SPSS. The data entry phase was completed by April 2003 and the data was sent to the GRC for analysis. The analysis was assigned to me and this thesis is the result of that analysis.

Thesis Goals and Overview

This thesis takes the data collected in the Development Survey and analyzes it as a case study in globalization, ecotourism, and development in a rural community of a developing country. The case study is valuable in that it provides actual household level and individual business level measures of the economic and social impact that ecotourism generated development has on peoples lives. It answers The World Ecotourism Summit's (2002) call for more baseline studies that improve our knowledge of ground conditions as well as Maria Bozzoli's (2000) call for applied anthropologists to study the impacts of sustainable development strategies on communities in Costa Rica. Additionally, it is one of few studies that focus on the impacts of ecotourism and sustainable tourism on people's lives and not on the environment.

The second chapter of this thesis will review pertinent globalization, ecotourism, and development literature in order understand the way in which development through ecotourism has been studied and in order to frame the discussion within the academic literature. This chapter will also explore the historical contexts in which the Monte Verde Zone is situated.

The third chapter will delineate the methodology used in the development survey. It will describe the methodology employed in creating the two survey instruments and will also describe the sampling technique employed for each. Also, it will describe the different levels of analysis that will be possible given the data collected.

The fourth and fifth chapter will report the results of each instrument, the household and business instrument respectively. Each chapter will first provide some logistical information about the process of conducting the research and the completion

rates, as well as problems that arose. The results will be summarized at the end of each chapter.

Finally, the sixth chapter will connect the results of the Development Survey back to the literature. Differences and similarities between the findings in the Monte Verde Zone and those predicted by the literature will be discussed. Also, productive new directions for future research will be considered.

Chapter Two

Literature Review

Globalization as Context

Both applied and academic anthropologists agree that globalization will become the most important concept framing future anthropological research (Kearney 1995; Hackenberg 1999a; Cleveland 2000; Durrenberger 2001; Lewellen 2002). However, agreement on conceptualizations of globalization has proved more difficult, particularly as many scholars correctly assert that definitions or conceptualizations of globalization are positioned (Kearney 1995; Mintz 1998; Tsing 2000; Friedman 2002; Amselle 2002; Wade 2002 & 2004). As Lewellen points out, “there are a plethora of theories of globalization, ranging from ultraglobalist to skeptical” (2002: 74). These theories of globalization differentially focus on the economic, the social, the political, and sometimes the abstract aspects of the contemporary globalizing world. For example, across disciplines scholars read and cite philosophical iterations that seek some nobility in the contemporary global moment, a qualitative break with the past. Scholte’s (2000) thorough conceptualization emphasizes the growth of supraterritorial relations between peoples that are changing the nature of social space. Giddens (1990) influential description of modernity and globalization talks about local events shaped by events occurring in far off locals. Harvey (1989) is often cited for his assertion that the contemporary global moment includes a compression of time and space. Appadurai

(1996) muses about cultural global flows and the post-colonial imagination filled with mediascapes and ethnoscapas.

But also across disciplines, scholars contend with ideological iterations that are not as concerned with the novelty of the evolving global experience but seek to further political agendas. For neoliberal economists, for example, many scholars would argue that globalization is “an ideology, the way the world *should go*,” while “for antineoliberals it is an ideology of the direction in which the world *should not go*” (Lewellen 2002: 74). It is therefore not surprising that in many of these ideological iterations globalization is talked about but not explicitly defined. It is, as Scholte (2000) points out, conflated with internationalization, liberalization, universalization, and westernization. It is a buzzword.

In the anthropological literature, many discussions of globalization, particularly in relation to its purported novelty, do not brim with enthusiasm. This is not to say that claims about potentially novel aspects of contemporary globalization are dismissed (whether truly novel or not). In defining globalization, for example, Kearney’s seminal article (1995) accepts and borrows many assertions articulated by other non-anthropological scholars. He paraphrases from Basch *et al.* (1994) in proclaiming that globalization includes “social, economic, cultural, and demographic processes that take place within nations but also transcend them” (Kearney 1995: 548). He quotes from Giddens (1990: 64) in asserting that globalization involves “the intensification of world-wide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa” (Kearney 1995: 548). He accepts Harvey’s (1989) contention that “marked acceleration in a secular trend of time-

space compression in capitalist political economy is central to current culture change” (Kearney 1995: 551). But, anthropologists differ, both with scholars from other disciplines and with other anthropologists, on many of the critical aspects surrounding the conceptualization of globalization. For me, there appear to be at least three distinguishable types of globalization critiques in the globalization literature within anthropology.

This first is best understood as coming from critiques of the development studies of previous decades (exemplified by Tsing 2000). These critiques argued that there was a lack of questioning of the development paradigm that saw the world as necessarily progressing toward more development in much of the anthropological literature (Escobar 1991; Ferguson 1990). Even though these anthropological scholars readily accept some of the more philosophical and abstract theorizing on globalization and modernity, such as Kearney (1995), they also transplant the same critique of development to those who readily accept the globalization paradigm and see globalization as inevitable. For example, in articles like Tsing (2000) the commitment of social scientists to study culture change through the globalization concept is deconstructed. She terms the enthusiasm in endorsing this concept by some as “globalism” and warns that the modernization concept held similar sway over scholars and that it took “many years before social scientists moved beyond endorsements, refusals, and reforms of modernization to describe modernization as a set of projects with cultural and institutional specificities and limitations” (2000: 328). Similarly, in delineating the impact that globalization theorizing will have on future anthropological endeavors, particularly the study of transnational communities, Kearney (1995) distinguishes conceptualizations of

globalization that he accepts from “political and ideological dimensions” of certain definitions of globalization (he calls this globalism) that are used by nation-states to further their own agendas. Additionally, anthropological scholars are also cautioned and critiqued for too easily accepting globalization ideology (getting caught up in globalism) (Kearney 1995: 549).

A second type of critique focuses on the historical analysis of globalization and its antecedents. Seen through a scholarly tradition that includes the dependency theory of Andre Gunder Frank (1966), Wallerstein’s world systems theory (1974) and Wolf’s subsequent critique (1982) of any study of the local that would present it as somehow pristine, unaffected by the forces of modernity and segregated from the impact of colonialism (there are no locals external to the world system), many anthropological scholars embrace those descriptions of globalization that view it as the continuation of a long-ago-initiated process with a complex political history and, therefore, question claims that would place globalization as primarily a new phenomenon (Mintz 1998; Amselle 2002; Friedman 2002). These scholars do not engage in describing the globalization concept by focusing on its newness as much as the previous group. Their focus is also not on the experience of the individual or the social construction of the experience of a globalized world. Rather, they are interested in critiquing the purported historical and political origins of globalization as a macro phenomenon and its future implications given its past.

The third type of critique is composed of those who want to use the globalization concept to frame practical discussions of development and the impact of global economic forces on people’s lives. Interestingly, the critique against embracing an unquestioned

globalization paradigm is best understood when reading some of the enthusiastic endorsements of the globalization concept made by scholars in this third vein of the anthropological globalization literature: applied anthropologists and development anthropologists. Their critique is against the abstract and philosophical character of some anthropological theorizing and is an appeal for a more practical focus (methodologically and theoretically). For example, Hackenberg asserts that frameworks such as modernization and development “served us well” in the past despite having become “entangled in acrimonious disputes,” and that “globalization, when grounded empirically at *both* intercontinental and local community poles, and connected by verifiable linkages, with consequences observed over time, could become the touchstone conceptual frame for revitalizing applied anthropology” (emphasis original, Hackenberg 1999a: 212). From his applied perspective, Hackenberg is more concerned with scholarship that contributes to policy formation and, as such, he dismisses critiques like Escobar’s (1989) or globalization conceptualizations like Kearney’s (1995), which he specifically characterizes as post-positivist social philosophy. Instead he encourages anthropologists to deal with what he calls the empirical level globalization that looks at current trends in global political economy:

We may ignore or even ridicule globalization as social philosophy. And we may avoid engagement with the empirical level of globalization phenomena. Many of us, as I have elsewhere noted, may choose lower-risk venues for employment (Hackenberg 1988). But the multiethnic underclass will not go away when we turn out the lights.

In the end, the main difference in Hackenberg’s applied iteration of the globalization concept is a greater concern for the real world outcomes resulting from current trends in the global economic policy of powerful nations; he shows more interest in the political

economy of globalization than its philosophical construction or deconstruction. This is evident in Hackenberg (1999b) where he does not bother to define globalization. Instead, he concerns himself with the possible disciplinary integration of anthropology and economics in order to better inform development planning associated with resettlement design, as resettlement has had disastrous consequences for the world's poor. Indeed, many applied anthropologists share this practical outlook. Cleveland (2000) and Durrenberger (2001), for example, argue for practical approaches to studying globalization that use both quantitative and qualitative data, consider practical issues, like environmental carrying capacity, and bring together humanistic and scientific approaches. Nor do these scholars' practical and applied foci lead them to reject more philosophical or descriptive studies of globalization. Hackenberg (1999a) specifically cites ethnographies as examples of the kinds of works that he endorses that are not necessarily applied but have great value because of their description of the lives of real people and their encounter with global forces.

Indeed, many anthropological ethnographies like Aihwa Ong's (1987) *Spirits of Resistance and Capitalist Discipline* or Devorah Barndt's (2002) *Tangled Routes* combine humanistic and scientific approaches using qualitative and quantitative data to serve as powerful critiques against neoliberals' pro-globalization ideologies (globalism) by describing the impacts that globalizing economic forces have on peoples lives in Southeast Asia and Mexico respectively.

This applied thesis will therefore use a globalization framework to impart on the research the conviction that the analysis of the local must respect historical context and the impact of global forces on the local. While it is important to realize that the

contemporary global moment produces some new and unique cultural experiences, such as access to new technologies that result in compression of space and time, it is equally important to remember that, as Tomilson (1999) asserts, the vast majority of people on earth still live in local life, which may be affected by globalizing forces but does not have the plethora of standardized, internationally similar spaces of global life (1999: 9). It is too easy to get caught up in uncritical discussions about the novelty of social experience under globalization (possibly fall into globalism) and to forget that there is an unequal distribution of these experiences. The analysis in this thesis will also share the practical outlook expressed by applied anthropologists in the study of globalization, because, whatever globalization is, the most important aspect of the debate for applied projects is its impact in the lives of peoples of the world, particularly the poor. As new literature is coming out that challenges pro-globalization arguments that were constructed from macro-economic data and also reveal the hegemonic influence that institutions like the World Bank wield in skewing macro-economic statistics that are used to judge economic policy world wide (Wade 2002, 2004), it becomes important to continue to evaluate the impacts of globalization forces at the local level in order to better understand how globalizing forces shape peoples lives.

Ecotourism as Development

The study of ecotourism as development involves the intersection of sometimes disparate lines of research that include social science studies of tourism and its impacts on tourists and locals, conservation biology evaluations of the impacts that tourism or ecotourism might have on the environment (and sometimes an ideological plea for ecotouristic principles), and articles on tourism and ecotourism as development strategies.

While it is beyond the scope of this thesis to fully document the history of tourism studies (and eventually alternative tourism or ecotourism) in the social sciences, it is nevertheless important to mention some of the most important themes in tourism research.

Some early influential works in the study of tourism in anthropology and other social sciences include MacCannell's (1976) seminal ethnography of tourism and modernity, which explored the importance of leisure in contemporary society. Stronza (2001) argues that MacCannell's important contribution was contending that one can understand the modern world (its alienations and need to reconnect with the pristine) by understanding the psychological motives and constructs of tourists. The tourist experience forges unity in fragmented modern society because a common experience that is shared by all comes to organize and order life. Much of Victor Turner's work bears mention here as well, as he was interested in analyzing the experience of tourist/pilgrim/traveler as a time out of normal time that provides freedom for the agent from normal structure (Turner 1969, 1978, 1982; Turner and Turner 1978). Similar more contemporary studies into the effects of tourism on constructing or reaffirming modernity include Bruner's (1991), in which he analyzes museums as places where tourists can affirm their ideas about the world and Graburn's (1989) who analyzes tourism as a ritual process that reaffirms social values. The value of these studies is that they conceptualize tourism as a globalizing force, a force that reduces social space. Although their claims about the commonness of the tourists experience and its purported unifying and beneficial effects are dubious, their works portray the tourist as an agent in the modern globalizing world.

But, much of the work on tourism in anthropology has been focused on the effects

of the tourism encounter and the impacts of tourism on destinations. In evaluating the impact of tourism on social structures, the anthropological literature, whether ethnographies or articles, has often concluded that tourism has negative effects (Stronza 2001). Further, Stronza (2001) asserts that anthropologists and other social scientists have also greatly challenged assumptions about the economic benefits of tourism. Stronza (2001) and Crick (1989) affirm that during the 1970s, and still to some extent today, economist “promoted tourism as an ideal strategy for development,” while “multilateral lending agencies funded touristic infrastructure in the Third World,” and tourism modernization was applauded as a “powerful catalyst for helping Caribbean and other places ‘take off’ into flourishing service-based economies” (Stronza 2001: 268). But, as early as the late 1970s, social scientists were arguing that tourism was not the cure for Third World economic troubles (Kadt 1979). Even detailed contemporary studies such as Pagdin’s (1995) or Sreekumar and Parayil’s (2002) reaffirm the established notion that tourism did little to alleviate the needs of local populations (Richter 1982). In fact, tourism often brought new kinds of social problems instead, such as sex tourism (Oppermann 1998; Pettman 1997). Additionally, private businesses tended to siphon off the profits to developed countries (Crick 1989). Specifically, tourism development has been blamed for disrupting subsistence activities and making locals dependent on the outside world (Oliver-Smith 1989; Mansperger 1995), or leading to increased stratification in local communities (Stronza 2001), or increased unhappiness resulting from loss of cultural identity and the creation of cultural dependency (Erisman 1983). Many scholars have also focused on the negative impacts that tourism has had on the environment (Honey 1999; Olsen 1997). In fact, Nash (1989) describes tourism

development as a form of imperialism, and Stronza (2001) concludes that it became the vanguard of neocolonialism.

More recently, however, social scientists, as well as development planners, conservationists, international entities like the UN, and national governments like Costa Rica's, have embraced, largely on potential, new alternative tourism development strategies such as ecotourism. Ecotourism is defined by The International Ecotourism Society (TIES) as responsible travel to natural areas that conserves the environment and improves the welfare of local people. The draw of these natural areas include both animals and biota such as in bird watching or coral reef diving (Hawkins 1994), but can also involve the natural history of an area and its indigenous culture (Ziffer 1989). Ecotourism, therefore, involves more than a journey of relaxation; it includes appreciation for and desire to learn about local ecosystems and peoples. Ecotourism is also ideally characterized as small scale and run by locals, and, therefore, has come to be regarded by many as a development strategy that has the dual advantage of benefiting the local economy while simultaneously protecting the local natural capital (World Ecotourism Summit Final Report 2002). As Stronza (2001) asserts, this has generated enthusiasm among social scientists looking to link conservation and development. Therefore, the rapidly growing ecotourism literature, which includes two new journals (Journal of Ecotourism and the Journal of Sustainable Tourism), is filled with guidelines written by advocates of ecotourism that include rhetoric about ideal practices or economic opportunities (Hawkins 1994; Hartshorn 1995; Ceballos-Lascurain 1996; World Ecotourism Summit Final Report 2002). But also, because its focus is on providing opportunities for local residents through grassroots planning, ecotourism

provides opportunities for applied research for disciplines like anthropology (Stronza 2001).

That most ecotourism occurs in undeveloped rural areas has been seen as an additional benefit, providing income in impoverished communities, discouraging migration to urban areas, and maintaining biodiversity. Particularly important for social scientists then is the emphasis that ecotourism touts on the non-exploitation of local peoples (Burnie 1994). Some countries, such as those in east Africa, have had significant ecotourism economies for many years. For example, Kenya and its national parks are regarded by some as the world's foremost ecotourist destination (Olindo 1991). This form of economic development has also been encouraged in impoverished Asian countries like Nepal and Tanzania (Whelan 1991).

It is important to note, however, that alternative tourism like ecotourism did not grow out of ideas put forth by developers, economists, or social scientists, but rather it began as part of the world wide conservationist movement. Ecotourism as an international phenomenon is dependent on western attitudes about the value of nature and responsible travel – usually to non-western destinations – and has to be understood within that context (Dilly 1999). There are very different western ideas disseminated, some of which appear to conflict; conservationists promote either the aesthetic value of nature or the understanding of the natural ecosystem and our place in it, while developers and locals may be interested in the value of nature as a source of revenue (nature as natural capital). In a sense, ecotourism is possible because there are western tourists who want to visit pristine ecosystems in impoverished rural areas, creating an opportunity for conservationists to proliferate conservationist principles and for locals to profit from

ecotourists (Menkhaus and Lober 1996). Articles like Hawkins (1994), for example, view ecotourism solely as an opportunity to capitalize on a niche market. Therefore, ecotourism involves the imposition of multiple western ideas about the value of nature – nature as a source of revenue in the form of tourist dollars, nature as something to be preserved – ideas that are accepted to differing extents by host communities. This has led some conservationists to question whether the adoption of conservationist principals by host communities is actually occurring (Hunter 1994; Holl *et al* 1995). Further, the conservationist literature is also pessimistic regarding the purported adoption of conservationist principles (or cooption of these principles) by economists and developers (Watkins 2000). Many conservationists point out that even ecotourism negatively impacts the environment if not properly managed and, in fact, may amount to just rhetoric in some cases (Hunter 1994; Watkins 2000; Boza *et al* 1995; Honey 1999). Therefore, even though ecotourism comes out of conservationist ethic, the conservationist literature on ecotourism is skeptical about its purported environmental benefits, such as its supposed minimal impact on the environment or its proliferation of western conservationist's values, largely because conservationists fear that ecotourism may amount to nothing more than business as usual. Part of the problem might be that, as Hunter (1997) asserts, much of the literature on sustainable tourism is overly simplistic and inflexible, and often fails to account for local circumstances. In fact, Hunter makes the argument that sustainable tourism rhetoric has developed in isolation from the sustainable development literature and has much that it can learn from it. Hunter tackles the problem from the perspective of environmental sustainability and therefore argues for a more adaptive paradigm for sustainable tourism, one that neither takes a “product-led”

(weak environmental) nor a “neotenus” (extreme environmental) tourism approach. He advocates for a sustainable tourism that contends with the specifics of a particular situation while addressing issues of equity, human well-being, and distribution of cost and benefits which ensue from the utilization of resources (Hunter 1997).

While conservationists who study the impacts of ecotourism may be weary of it, researchers who study the social and economic dimensions and impacts of development through ecotourism are also becoming cautious in recent years in touting its benefits. Some authors claim that locals receive minimal economic returns and have little to say in prioritizing development objectives (Hartshorn 1995; Place 1998; Weaver and Elliott 1996). In fact, Hunter’s (1997) critique of sustainable tourism can be taken even further if one applies the lessons learned by anthropologists and other social scientists working in development projects over that last few decades. Uphoff *et al* (1998), for example, reviewed many successful and unsuccessful development projects to find what worked. In sustainable rural development, successful projects – whether initiated by government, nongovernmental organizations, individuals, private sector, or communities themselves – were “undertaken in a *learning process* (LP) mode and with assisted *self-reliance* (ASR) as both ends and means” (emphasis original; Uphoff *et al* 1998: 113). LP basically emphasizes that development projects should be appropriate and flexible as the development project is a process that often encounters problems – often knowledge brought into a project about the task and task environment turns out to be wrong (this point is consistently made in similar articles like Hunter1997 or Eyben 2000). Also, the ASR mode contends that projects should always have self-reliance as an objective because, unless the local communities both accept and become invested in the

development project by contributing directly to it from their own “meager endowments,” there is little chance that the development project will succeed (Uphoff *et al* 1998: 198). For Uphoff *et al*, LP and ASR are both philosophies of development and practical strategies.

The lesson as applied to ecotourism is that host communities must adopt conservationist values and become involved in conservation efforts for an ecotourism that is environmentally sustainable. However, there appears to be no easy answer in the literature to the practical problems of managing ecotourism that is economically sustainable. Both Hunter (1997) and Uphoff (1998) focus more on the initial stages of sustainable development; that is, they are more concerned with obstacles that impede the initiation of the development process and its adoption by the host communities. They only marginally address problems that may arise from rapid economic growth once development is underway and takes on a life of its own. In the literature, it seems that once ecotourism is underway, what keeps it in check is characteristics of the site. For example, most ecotourism occurs in remote rural areas that may have poor access.

One of the classic examples in the anthropological literature of successful ecotourism is the campesino controlled tourism in Lake Titicaca (Sheldon and Hakim 1988). Because of the remoteness of Lake Titicaca, located 12,000 feet up in the Andes in the border between Peru and Bolivia, the scale of this island tourism was small and the experience only for the rugged. This small scale tourism fostered “an array of committees – for example, housing, weaving, food, and transportation” – that the Taquilenos (indigenous people), who practice communal ownership, developed to manage tourism (Sheldon and Hakim 1988: 49). However, by the 1980s, an increase in scale of

tourism slowly resulted in imposed government regulations on the size and type of motor used in tourism boats and competition from hotels in the city of Puno (on the shores of the lake), who move tourists around in their own boats in larger numbers for quicker visits. These developments seriously undermined local control as tourists no longer stayed with the Taqilenos and, consequently, profits were siphoned away from their communities (Sheldon and Hakim 1988).

Although recently more articles that look at the potential impacts of alternative tourism are being published in anthropology (Schiller 2001; Juarez 2002), the ecotourism literature in anthropology (and outside of it) lacks sufficient studies that focus on people and that question whether ecotourism affects local communities in a positive manner. Because ecotourism is supposed to be small scale and locally controlled, it is particularly important to research its impacts on local populations as tourism based economies expand and locals attempt to manage (or not) resulting difficulties for the community. This applied thesis, therefore, is uniquely positioned to provide such an analysis – or at least set the foundations for a more exhaustive future analysis.

Globalization, Ecotourism, and Development in Costa Rica

To understand the context in which ecotourism exists in Costa Rica, it is necessary to look at the history of both its conservation efforts and its economic development in a global context over the last few decades. Conservation efforts in Costa Rica can be traced to at least the 1970s when Costa Rican conservationists like Mario Boza and Alvaro Ugaldo began to lobby for the preservation of land through the creation of national parks in response to the deforestation that had been taking place since the 1950 and that had resulted in the loss of one third of the country's forest cover (Boza

1993; Boza *et al* 1995). At first, conservation efforts were met with indifference and the obstacles were numerous, but the situation was perceived as urgent by these agents of change:

By the early 1970s, Costa Rica was witnessing intensive deforestation to open new lands for agriculture and cattle raising; chaotic land settlement by campesinos (landless peasants), normally following the course of new highways; active trade in wild animal products; very weak environmental education; total indifference to environmental problems on the part of the general public and decision makers; and lack of protected wild areas that could provide a model of how to conserve nature (Boza 1993: 240)

The strategy that these conservationist used, and one that would eventually result in an impressive network of national parks, involved procuring funds and personnel both from the Costa Rican government and also from international funding agencies, such as the Wild Life Fund, or even agencies and institutions in foreign countries, such as the US (Boza 1993: 241). Important in the strategy from the beginning was bringing in international celebrity supporters of their cause such as Prince Bernard of Holland and Prince Philip of England (241). These Costa Rican conservationists also sought to create a National Park Fund as part of the National Park Service that reinvested park entrances fees back into the park system. Additionally, they utilized nongovernmental agencies in order to side step the bureaucratic red tape in the allocation of internationally donated funds (241). Further, they systematically sought to generate an interest in conservation by writing articles about Costa Rica's natural beauty in the national and local newspapers. In fact, the strategy of conservationists deliberately involved the creation of national parks in areas of "stunning scenic beauty, on historic sites commemorating heroic exploits of the past" in order to "merge historical, scenic, and natural values so that no one could object" (240). These strategies eventually generated environmental

education programs in the country's universities and engendered new generations of conservationists. Therefore, conservation in Costa Rica is intimately connected to the global context even from its inception; the efforts of these conservationists could not have succeeded without the support of international global actors and the deliberate side stepping of governmental bureaucracy. Because of the momentum generated by conservationists, Costa Rica, under president Jose Maria Figueres (1994-1998), began to take steps to end environmentally destructive activities. For example, he stopped the construction of pacific coast resorts, and he imposed a carbon tax. These actions occurred in response to global forces (Tenenbaum 1995).

But to understand ecotourism in Costa Rica, one must also look at the role that economic forces play in its development. Like many other countries in Central America, the Costa Rican economy had been strongly agrarian through much of its history relying on the export of bananas and coffee and, to a smaller extent, cattle products. Serious industrialization efforts, in fact, only appear in the decade of 1960s (Itzigsohn 2000). But because of rapid growth in the economy during the 60s and 70s, there was an economic crisis in the early 1980 that was prompted by the fall of world coffee prices, the increase in oil prices, and the instability of the area because of the Nicaraguan communist revolution of 1978 (Bulmar-Thomas 1987). During the 1980s, the country (and much of the region) fell into greater economic hardship and eventually the highest debt per capita in the world, which led Costa Rica to obtain loans from the IMF and World Bank (Bulmar-Thomas 1994; Itzigsohn 2000). During this decade, the Costa Rican economy experienced some shifting. The amount of people employed in agriculture was decreasing with manufacturing slightly increasing. But the biggest rise during the 1980s

and continuing in to the 1990s occurred and is still occurring in service sector employment (Bulmar-Thomas 1994).

This is where conservationists' efforts converge with the economic condition that the country was undergoing. By the late eighties, not only had conservationists succeeded in establishing a large national park system which attracted international visitors, but also Costa Rica was receiving more money from the US government and private funding for conservation and research than any other country (Hambelton 1994; Boza 1995). Hambleton (1994) cites a survey conducted by the US Agency for International Development in the early 1990s that tallied 33 US government programs supporting biodiversity and 114 projects.

Costa Rica was a country struggling economically to get out of debt and being pressured to diversify its economic profile by the IMF and World Bank (Bulmer Thomas 1994; Itzigsohn 2000) – not just rely on exporting coffee and bananas. Simultaneously, there are international interests in conservation in Costa Rica (with money backing it up) and an established national park system attracting international visitors. Therefore, in the late 1980s and early 1990s, when there was rapid growth in the tourism sector in Costa Rica, particularly in beach resorts and hotels along the pacific coast (Bulmer-Thomas 1994), the government, applied scholars, and policy makers begin to develop and advocate for economic strategies around sustainable tourism.

One can see in articles like Adamson Badilla (1994), Figueroa B. (1996), and Fürst and Hein (2001) that these scholars and policy makers (economists and conservationists) as well as those working with them, are aware of the challenges inherent in sustainable tourism, particularly the balancing of conservation and economic

growth, but still believe it is an opportunity to grow the economy in a positive way. In fact, these articles really frame the discussion not in terms of environmental benefits, but in the context of the general lack of economic growth in the region, the “lost decade” of the 80s (alluding to the debt crisis); their focus is the opportunity that sustainable tourism offers to ameliorate the economic troubles of the past decade. Additionally, most of these articles are of a theoretical nature, much like Hunter’s (1997); they do not elaborate the practical dimensions of the application of such strategies.

This led some conservationists to debate whether ecotourism in Costa Rica can really be sustainable. For example, Honey (1994) argues that the increasing number of tourist is stressing environmental resources in some of Costa Rica’s national parks, which, some researchers say, makes ecotourism a “mixed blessing” (Taylor 1994). Many conservationists question whether ecotourism and sustainable tourism in Costa Rica are truly sustainable given the past environmental history of the country and the difficulty of managing economic growth so it does not conflict with conservation (Hunter 1994, Honey 1999). But on the other side, advocates of Costa Rican ecotourism point out that Costa Rica should be regarded as an experiment, not ecotopia, and that the country continues to become more conservation minded (Boza *et al* 1995). Indeed, articles like Jacobson and Lopez’s (1994) evaluation of the impact that tourism might have on nesting turtles show that ecotourism can have a negligible impact on destination biota (at least in the short run). Further, according to the seventh edition (2001) of the *Estado de la Nacion* (a government sponsored publication produced for pedagogical purposes that evaluates the state of the nation, including environmental issues), the Costa Rican government sponsors environmental education programs such as “Educacion

Participativa Sobre la Gente y la Naturaleza,” which uses community based perspectives to create didactic materials that will integrate traditional and technical knowledge about the environment and species to help people make better environmental decisions. These projects are coordinated by the two national universities (UNA and UNED) along with the Costa Rican government. Government produced publications, such as *Estado de la Nacion* (2001), also demonstrate that the Costa Rican government is taking the enforcement of conservation regulations seriously. In 2001, it reports 1,498 citations that documented the violation of environmental law and were brought before Costa Rican courts. *Estado de la Nacion* even suggests areas in which conservation efforts must be improved. For example, it argues that more attention has to be paid to water issues and pollution of both fresh and salt water. There are also articles like Paaby *et al* (1991) that document government sponsored programs that train rural residents as naturalist guides.

However, there is little available literature that evaluates the impact that ecotourism is having on rural communities in Costa Rica. Maria Bozzoli (2000) was one of the first to encourage applied anthropologist to study cultural aspects of Costa Rican initiatives that promote sustainable development and sustainable tourism. This applied thesis is an attempt to fill that gap by evaluating the impacts that ecotourism is having on the people of the Monte Verde Zone.

Ecotourism in the Monte Verde Zone

As the development of the Monte Verde Zone has accelerated over the last two decades, shifting the local economy gradually from agriculture to ecotourism, concern for the ecological and social character of the area has increased (Tobias 1989).

Environmentalists worry that certain biodiversity hotspots, like the Monte Verde Zone,

are also sites of increasing human population density and growth. Species in these regions, therefore, may be particularly at risk. In Monteverde, the concern led to efforts to determine the status of what is now named the Monteverde Cloud Forest Preserve (MCFP), as a step toward controlling visitors and thereby mitigate, if not prevent, long-term damage to the biodiversity of the area which is now, because of ecotourism, intricately linked to the economic well being of the area. As a result, there is now substantial management of the MCFP (Murphy *et al* 2000). Chamberlain (2000: 376) asserts, the “positive economic growth of the area is strongly related to the MCFP,” bringing jobs that generally pay more than farm jobs. In fact, in 1992, the economic impact of the tourist industry on the inhabitants was estimated at \$5 million, 13% of which was spent in the MCFP (Chamberlain 2000: 376; Solorzano & Echeverria 1993). Also, estimates generated from a sample of tourist in Monteverde showed that US ecotourist visiting tropical rainforests in Costa Rica place a value of \$1150.00 per visit on the experience (Menkhaus and Lober 1996), although it did not determine the amount spent while in the Monte Verde Zone.

Perhaps a good way of characterizing the Zone is as an ecotourism cluster with nature at the center of infrastructure provided by hotels, transportation, and other attractions, such as galleries and stables for guided tours (Acuna Ortega *et al* 2000). Acuna Ortega *et al* state that the cluster has generated many *spin offs*, like the previously mentioned *ranario* and serpentarium. Although they delineate many strengths and weaknesses that characterize different sectors of the cluster, they conclude that there is much to laud in the Monteverde case including communal participation in conservation activities, proliferation of natural attractions, an atmosphere conducive to conservation,

and an interest by business owners to reach environmentally friendly standards.

But despite growth and assumed benefits, few studies have been completed on the effects of the ecotourism development on the local population. There is evidence that “social, economic, and infrastructure problems” resulted from increased tourism and immigration (Chamberlain 2000: 376). The roads have deteriorated, demand for public services is outpacing supply, the price of land has increased to an amount comparable to San Jose, and waste management programs had to be initiated (2000: 376). This applied thesis will contribute to the understanding how the process of development affects households and businesses in the Monte Verde Zone. It will begin to fill a gap in research that evaluates ecotourism’s effects on people by analyzing representative household level information of this population undergoing ecotourism generated development.

History of the Monte Verde Zone

Monteverde, as a legal political entity, is located in district Monte Verde within the Puntarenas county of the Puntarenas province. But colloquially, the name refers to both the small Monteverde community located adjacent to the Monteverde Cloud Forest Preserve (MCFP) and a larger area which includes many small communities that stretch roughly from Quebrada Maquine Creek to the MCFP. The Monte Verde Zone, a more inclusive label that is also commonly used, is perhaps a more appropriate descriptor for the larger region. This Monte Verde Zone encompasses many small communities including the town of Santa Elena, Cerro Plano, the MCFP, the children’s Rainforest (a smaller preserve also located in Monteverde at a lower elevation and down the road from

the MCFP), and areas on both sides of the Continental Divide down to about 700m elevation (Nadkarni & Wheelwright 2000: 5).

The Monte Verde Zone was first settled by Costa Ricans in the early decades of the 1900's by gold miners, settlers, and farmers. The smaller Monteverde community, however, was established in 1950 by American members of the Society of Friends (Quakers) (Honey 1999; Nadkarni & Wheelwright 2000). Prior to the 1980's the principal industries in the Monte Verde Zone were dairy farming, cattle ranching, coffee growing, and a cheese factory. In order to protect their mountain water supply, the Quaker community set aside about 1000 hectares of cloud forest (Honey 1999). But Costa Rica, like much of Central America, underwent rapid deforestation after WWII, accelerating in the 1970s. The original forest preserve, set aside to protect the Monteverde water supply, became the subject of conservationists' efforts, an ecotourist destination, and the catalyst for the protection of thousands of hectares of forest in the Monteverde region (Honey 1999).

Ecologically, the Monteverde area is labeled a tropical mountain cloud forest (TMCF). The TMCF is defined by Hamilton *et al* (1993) as the relatively narrow altitudinal zone with frequent cloud cover during much of the year, an area in which solar radiation and evapotranspiration are reduced, and precipitation is enhanced by canopy interception of cloud water. Cloud Forests, therefore, are generally regarded as protecting watersheds by reducing run off and erosion (Nadkarni & Wheelwright 2000: 8-9). The TMCF is one of the world's most threatened ecosystems (Nadkarni & Wheelwright 2000: 9; Roach 2001). Threats to the ecosystem in Monte Verde Zone include but are not limited to: (1) deforestation due to cattle grazing agriculture; (2) wood harvesting, (3)

exploitation of non-wood forest products; (4) global climate change; (5) hunting; (6) and now, high volume, human-use recreation (Nadkarni & Wheelwright 2000: 9; Hamilton et al. 1993; Lugo & Lowe 1995).

The population of the Monte Verde Zone is now fairly heterogeneous. The Monte Verde Zone is comprised of many communities of varying sizes, historical depth, and organizational complexity (see Table 1).

Table 1: Population of the Monte Verde Zone (circa 2000)

Community	Population
Santa Elena	2160
Monteverde	264
Cerro Plano	800
San Luis	339
Rio Negro	54
La Lindora	125
Los Llanos	231
Canitas & Trapiche*	400
La Cruz*	100
Total	3123
*Data are estimates as these communities are outside Monte Verde County Borders.	

An important economic label used to describe these communities and their economic relationship, particularly prior to ecotourism, is the Monteverde “Milkshed”. The Monteverde “Milkshed,” the area from which milk and labor comes to the cheese factory, which is located in the Monteverde community, includes a number of small interconnected communities situated at various elevations along the *Cordillera Tilaran*. The “Milkshed” encompasses a larger area that reaches further down the mountain relative to the other descriptive label used for the area, the Monte Verde Zone. Various informants during our site survey noted that people who live in these more rural satellite

communities often work, at least occasionally, in one of the three larger communities of Santa Elena, Cerro Plano, or Monteverde.

As Honey (1999) asserts, this region is undergoing tremendous social and organizational change because of tourism. The smaller size of the communities in their first decades, along with the influence of the Quaker ideals of self-reliance, democracy, non-violence, and community responsibility, probably necessitated and facilitated a commitment to social cooperation. This communal spirit was evident in the Santa Elena Co-op, the addition of non-Quaker stakeholders in the cheese factory, and the Monteverde Conservation League. However, the increase in tourists to the Monte Verde Zone, has fostered a competitive set of social relations. This is evidenced, in part, in the ominous dismantling of the Santa Elena Coop – caused largely by more recently arrived competing businesses.

Signs of tensions that relate to social organization have also come to the forefront recently in the Monte Verde Zone. There is a large movement to fight domestic violence and empower women. Social roles and gender roles may be changing as well. In San Luis, each woman interviewed during the MVI-GRC summer 2001 field course was a homemaker. In contrast, in the three bigger communities there were a large number of women in the workforce. Therefore, the development of the Monte Verde Zone is not simply changing the occupational and income structure of the area. It also appears to be changing the very social character of the communities. Economic growth is a magnet attracting immigrants (from other areas of Costa Rica as well as foreign countries) with diverse motivations and intentions. There appear to be different settlement patterns occurring related to these new arrivals. Costa Ricans from other areas and Nicaraguans

reportedly tend to settle in the large communities of Santa Elena and Cerro Plano, as well as the surrounding areas. In contrast, immigrants from the U.S. and some European countries have tended to settle in Monteverde. While Costa Ricans and Nicaraguans reportedly come seeking employment, immigrants who come from the U.S. and Europe are apparently more likely to be retirees, researchers, or people seeking a rural and somehow more “natural” way of life.

This is not to say that Monteverde was a pristine place that is now being perturbed. As many in the community remember, and some of the older Quaker residents admit, residents of the area were not conservationists at first (Honey 1999). The dairy economy led to the deforestation of the Pacific slope from 99.9% forest cover to 25% and has resulted in the erosion of 60% of the Pacific slope. The impact of these activities is still causing problems to conservation efforts because most of the species that inhabit the various preserves are altitude migrants that move down the Pacific slope during different times of the year (largely because of a phenomenon known as cascade fruiting). These species constitute the attraction that brings many of the ecotourists in the first place. The problem, as it relates to development, is that the species need corridors of continuous forest cover in order to move down the Pacific slope. This same area, however, is where all of the new development is occurring and, with the projected population growth and imminent paving of the road, the situation is likely to deteriorate. The Monteverde Institute has been looking at this issue for some time now, but as noted earlier, the emphasis has been on conservation biology and sustainable planning.

Chapter Three

Research Methods

Research Problem

First, it is important to lay out the problem that the Development Survey was set up to address. As previously mentioned, MVI has become more involved in social and health issues that pertain to the local community, particularly those that are affected by socioeconomic growth and tourism. In their partnership with the USF GRC, they hope to gain some insight into some problems that are affecting the local population as a result of development prompted by tourism. Some of the local concerns include water scarcity, explosive population growth and subsequent overcrowding of certain areas, increased traffic, and increased cost of living including rising prices in real estate. As a result, the MVI and USF GRC partnership decided to begin to plan and partially engage in an ambitious multidisciplinary longitudinal study, The Triangulation Study, to track development and its various impacts, both social and environmental, on the Monte Verde Zone. Before this Triangulation Study can be fully initiated, background data must be gathered and preliminary studies must be completed in order to properly apply for funding grants and also in order to have some initial inventory of some basic demographic indicators. As such, the USF GRC and MVI agreed that a baseline Development Survey should be undertaken.

Survey Objectives

The Development Survey's objectives were laid out by the development research coordinator of the GRC, Dr. Trevor Purcell:

1. to determine the basic demographic profile – including household structure – of the different communities constituting the Monte Verde Zone;
2. to determine the occupational and income structure of the Zone and how they relate to the development in general and ecotourism in particular;
3. to determine, in preliminary largely qualitative terms, the magnitude of the ecotourism sector and its impact on the development process;
4. to determine basic attitudes of each community's population towards ecotourism;
5. to determine, in preliminary terms, the structure and organization of the different communities, how the communities are related, and how governance is currently structured and perceived; and
6. to determine differential community utilization of some natural resources and public services in the Monte Verde Zone.

Research Question

The broader, encompassing set of links between ecotourism and natural and human systems will be addressed by the Triangulation Study, which will consist of multiple phases. This broader study's research question was developed by a group of multi-disciplinary researchers at the Globalization Research Center and asks: *“How has ecotourism affected the rate, character and patterns of development, and what are the effects of such development on biodiversity and natural capital, community health,*

nutrition and rates of infectious diseases, and local culture, knowledge, and political systems?”

The Development Survey, in which I participated, was conceived as a preliminary phase of the Triangulation Study, and provides some preliminary baseline indices of ecotourism and development, with some degree of historical perspective, as a foundation for the Triangulation Study. The key question for this phase of the research was developed by the development coordinator and reads: *“What is the role of the various segments of the Monteverde population (community, occupational, locals, immigrants, business, etc.) in the overall development of the local economy and social structure?”*

Methodological Framework

As many prominent applied scholars like Singer (1994) have argued, applied anthropology should be primarily problem focused. Although applied anthropologists' methodological toolkit is vast, most appropriate for the research conducted in this phase of the Triangulation Study, The Development Survey, are quantitative techniques. Of course, the development of quantitative instruments must always be preceded by archival research and some qualitative interviewing (Bernard 1995). This pre-requirement was met by research conducted in the summer of 2001 and subsequent archival research in the 2001-2002 employment period of my internship. But ultimately, the goal of the Development Survey, as outlined by the objectives, was to create a profile of the Monte Verde Zone's community using mostly demographic data, so a quantitative survey instrument was most appropriate.

Further, this thesis uses a methodological approach that adheres to basic principles that are inherent in a scientific methodology for the social sciences and that are

especially appropriate for this kind of survey work. As H. Russell Bernard (1995: 3-4) has pointed out with regards to scientific anthropological research, the “norms of science,” which include a striving for objectivity, use of an explicitly stated method which is built upon empiricists assumptions (reality is out there to be discovered and direct observation is the way to discover it), and a reliability that can transcend researchers, disciplines, and nations, can only enhance social science research. But, even though the methodology used for creating and conducting the survey itself is scientifically rigorous, making the analysis of data collected amenable to statistical analysis, the conceptualization of the study is far more important in insuring the quality of the interpretation and discussions of the findings.

Methods of Data Collection

Archival Research

Archival research was continually used throughout my internship. Initially, I employed this method of data collection before and during the summer of 2001 in order to find all information available on Monteverde. I also used it continuously during the planning stages of the development survey during the fall of 2001 and spring of 2002. Finally, I employed this method once again in analyzing the data and writing my thesis from summer 2003 to summer 2004.

Informal Interviewing

During my initial summer stay in Monteverde (2001) and throughout subsequent site visits, I took part in many informal interviews with key stakeholders in the Monteverde community. These informal interviews helped all of the researchers

participation in this project obtain a more complete understanding of the complexity of the particular site and problem being researched.

Survey interviewing

Two survey instruments were created for the Development Survey, one that was to be used for households and the other for businesses. The two instruments were developed after archival research and informal interviewing of key individuals was accomplished.

Research Methodology for the Development Survey

The Triangulation Study addresses complex and dynamic links between ecotourism and development. It treats ecotourism as an independent variable, and the natural and human system that are affected by the development of ecotourism as the dependent variables. Of course, the GRC's multidisciplinary team of researchers is also interested in the feedback loop inherent in the relationship between ecotourism and natural and human systems. In other words, they are also interested in how changes in human and natural systems, and particularly natural capital, affect ecotourism development. Furthermore, the Triangulation Study seeks to understand the development of the Monte Verde Zone with some degree of historical depth. The survey provides the basic data on development, ecotourism, and social organization for the Triangulation Study, but the analysis of this data and the creation of the current profile of ecotourism in the Monte Verde Zone is historically based, incorporating information from various disciplines that study ecotourism and development.

The Development Survey as part of the Triangulation Study is conceptualized as a "One-Shot Case Study" on a natural experiment (Bernard 1995). This research design is

used primarily as a way to orient the goals of our research. The idea is that there is a natural experiment occurring in the Monte Verde Zone independent of the researchers. The researchers begin studying the site after the intervention, or the application of the independent variable (ecotourism) to the experimental groups (the communities of the Monte Verde Zone); that is, the researchers are reconstructing the natural experiment post intervention (One-Shot Case Study). Therefore, the Development Survey will gather baseline information that can be used to begin to assess how the independent variable (ecotourism) has affected the many dependent variables (different segments of the Monteverde community). Of course, this conceptualization is a way of acknowledging the limitations of our study as we cannot collect any primary data ourselves of the Monte Verde Zone prior to ecotourism. So we cannot directly compare our data collected in the present with some similar data collected in the past as none exists. Further, it is very difficult for us to make any causal statements or describe change unless this survey is repeated again at some point in the future. It is also impossible for us to manipulate the experimental groups and confounding variables as this is a naturally occurring experiment, so we cannot be certain that the effects observed are solely the result of development through ecotourism. What the Development Survey can achieve, however, is a more complete description of the businesses and households in the Monte Verde Zone that begins to elucidate the relationship between ecotourism and changes in the area. It is a first step in a longitudinal research processes.

The survey consist of two components: (1) a proportional sample of households in all nine communities from which data will be collected on the demographic composition and dynamics of the area, as well as on opinions regarding governance, ecotourism, and

development; and (2) a 100% survey of businesses intended for the construction of a profile of the development of the sector and its impact on the overall socioeconomic evolution of the Zone. The survey instruments were translated to Spanish by MVI personnel, and were administered by native surveyors selected by MVI with the approval of USF-GRC. The native surveyors underwent training in basic survey protocol, confidentiality, survey courtesies, and were familiarized with the goals and purpose of the research. The training was conducted by USF-GRC personnel, specifically the development coordinator and I, with the additional assistance of MVI personnel.

The Household Survey

The household survey consisted of a stratified sample of the households in all nine communities comprising the Monte Verde Zone (see Table 2). As each community is demographically unique, the sample is structured to account for community distinctiveness by maximizing the between-group variance. That is, the total sample is comprised of a proportional sub-sample of each community based its household population size (see Table 2).

Table 2: Households and Sampling in the Monte Verde Zone (circa 2000)

Area	Households	Representative Sample*
Santa Elena	342	181
Monteverde	174	120
Cerro Plano	81	67
San Luis	73	61
Rio Negro	14	14
La Lindora***	24	23
Los Llanos***	44	40
Canitas**	77	64
La Cruz**	19	19
Total	684	246
Total Sample if Stratified		589
*Representative Sample obtained using Krejcie and Morgan's formula from Bernard's <i>Research Methods in Anthropology</i> . **These communities are outside Puntarenas political border so estimates were obtained. ***Data is estimates.		

Each household to be surveyed is selected randomly from the total number of household in each community using household maps obtained from MVI. Where no map is available a ratio is used (every other house, for example).

The original samples outlined in the research proposal were taken from the Monteverde Clinic annual health assessment reports for 2000. These figures were eventually not used as the above figures (Table 2) were provided by MVI and are significantly different for Cerro Plano, La Cruz, La Lindora, Los Llanos and San Luis due in part to the rapid population growth which is estimated at 5-7% per year in some areas of the Monte Verde Zone. The figures in Monteverde and in Santa Elena are also slightly off, most likely due to the erratic development patterns that make housing counts difficult. In the case of Cañitas, the discrepancies may be the result of different town limit than what is commonly regarded as the town limit between Santa Elena and Cañitas.

For the purposes of this survey, we counted all houses located after the *Trapiche* (sugar cane mill) as belonging to Cañitas. The point here is just to emphasize that the population estimates may vary depending on the source, especially because many of the small communities may not have clearly demarcated boundaries.

The instrument is included in Appendix B. The questions are structured and straight forward so that survey participants are all asked the same questions in the same way. Most of the questions contain a set of possible responses from which the informants have to choose their answers. The survey includes a few open response questions, but the majority of the questions have a list of possible answers. Even though the development coordinator and I came up with the original set of questions, other members of the Triangulation Study, MVI personal, and community stakeholders suggested questions that we added. This made the household survey somewhat lengthy. It is also important to note that even though many of the questions sought out household level data, there were also sets of questions that asked the opinions of the individual respondents completing the survey. Therefore, we are collecting data for two levels of analysis: a household level which is used to describe and compare households, and a respondent level, which would describe and compare respondents.

The Business Survey

The business survey consists of administering a questionnaire to all businesses in the Zone. The survey is intended to accomplish two goals: (1) provide data for the construction of a profile of the ecotourism sector; and (2) provide data to allow for an assessment of the impact of the ecotourism sector – in relation to the wider economy of the Zone – on the overall socioeconomic development of the Monte Verde Zone. The

instrument covers data such as type of businesses, employment pattern and magnitude, businesses capacity, types of clientele, age of businesses, types of ownership, and the effect of the seasonality of the tourism trade on business operation.

Expected Outcomes

It is important to note that these surveys are not meant to be an exhaustive assessment of the Monteverde Community. This is the most preliminary of steps and is not done to the exclusion of other important methodologies that will be employed in later phases of the Triangulation Study, including a full ethnography conducted by a trained ethnographer on the ground. The Development Survey was undertaken for the purpose of generating baseline data to be used both by the community and its governing interests and by the GRC in its future study of the Zone.

The GRC is interested in making both a theoretical and applied contribution through the Triangulation Study. Implicit in the GRC's mission is an attempt to understand manifestations of globalization at the local level. The Triangulation Study is also interested in the process of cultural, socio-political, and economic change resulting from a development strategy. The GRC hopes to develop an analytical model for understudying ecotourism development that can be employed to analyze other ecotourist locations. The GRC also plans to collaborate and disseminate any and all findings with local and national policy makers.

As relates to my specific involvement in the Triangulation Project, we have made arrangements with MVI to make all of the data collected through the Development Survey public and available through the MVI library for both the Monteverde public and future researchers. We are also sharing our results with the Tourist Chamber who has

wanted to undertake a similar survey for many years. The development coordinator and I also plan to publish an article that analyzes some of the findings that result from the development survey.

Ethical Considerations

In collaboration with MVI, we developed an ethical protocol and an informed consent form, which we submitted for IRB approval. Because we were going to make the results of the survey public, we developed a survey instrument that would be coded and would protect the confidentiality of the informants. We also had MVI and other members of the community review our survey instruments and informed consent forms and propose changes where necessary.

Procedurally, the surveyors approached selected households and requested to speak with a senior member of the household who is over 18. The native surveyors explained the Development Study and read the informed consent forms to the subject before he or she decided to participate. The surveyors only proceeded after securing a signed informed consent. For the household survey, the surveyors used codes for the household number and location. In addition, the survey did not collect the family name of the subjects completing the survey or the family names of any other members of the household. Because the participants could have faced personal questions that they did not wish to answer, all participants were given the leeway to quit any time they felt uncomfortable. For the business survey, the surveyors used codes for the business and did not collect the name of the business owner or manager. Also, the surveyors handling and processing the raw data were instructed to properly keep and respect the confidentiality of the subjects. After the data was entered into SPSS, the raw data was

collected and kept at MVI and at USF GRC where only the PI and the director of MVI, as well as others they designate, have had access.

Chapter Four

Development Survey Results: Household Instrument

Introduction

This chapter presents the results of the Development Survey obtained from the household instrument and collected in the summer of 2002 by native surveyors in the Monte Verde Zone, Costa Rica. The results are reported in a manner consistent with the Development Survey's objectives as outlined by the development research coordinator of the USF GRC, Dr. Trevor Purcell. To reiterate relevant objectives are:

- to determine the basic demographic profile – including household structure – of the different communities constituting the Monte Verde Zone;
- to determine the occupational and income structure of the Monte Verde Zone and how they relate to the development in general and ecotourism in particular;
- to determine basic attitudes of each community's population towards ecotourism;
- to determine, in preliminary terms, the structure and organization of the different communities, how the communities are related, and how governance is currently structured and perceived;
- to determine differential community utilization of some natural resources and public services in the Monte Verde Zone.

First, information concerning the completion of the survey and data entry process is presented. This general completion information section uses the information contained

in the final report of the execution of the Development Survey prepared by the research coordinator on the ground, C. Sophia Klempler, MPH (Appendix A).

It is also important to remember that although the household survey was primarily designed to collect household data from a representative random sample of households, the instrument also contained questions that were specifically aimed at collecting information from the respondent (household representative), ascertaining his or her opinions or attitudes (an opportunistic sample of individuals). These individual respondent results will be reported before the household results along with information that describes the characteristics of the respondents (individuals who represented their household). Then, the results on information that pertains to the household will be presented. Finally, a concluding section will summarize and synthesize the results and begin to answer the research questions for the Development Survey as much as possible [*“What is the role of the various segments of the Monteverde population (community, occupational, locals, immigrants, business, etc.) in the overall development of the local economy and social structure?”*].

General Completion Information

According to the final report on the completion of the Development Survey submitted by the MVI research coordinator on February 12, 2003, the 12 native surveyors completed 532 household instruments and 93 business instruments during late August thru September with some additional data collection continuing into the middle of October. Further, on December 16, 2002, a debriefing meeting was held in Monteverde by the research coordinator to which all of the native surveyors were invited for the purpose of discussing the experience of administering the surveys as well as disclosing

any perceived weaknesses or flaws with the two survey instruments. Eight of the eleven remaining surveyors attended the meeting but the transcription of that meeting (which was apparently recorded) was never sent to the USF GRC by the research coordinator. When I spoke to the research coordinator regarding the outcome of that meeting, she revealed that the only complaint concerned the length of the household survey which often took more than an hour to administer.

Household Survey

The household survey was completed during the months of August and September by 12 field surveyors. One of the field surveyors was asked to leave her position by the MVI research coordinator because of her inability to attend weekly meetings due to scheduling conflicts, her frequent practice of interviewing people outside of the areas assigned to her, and her use of a survey form that was not in the language that was used in collecting that data. The research coordinator reported that the data from this particular survey is not included in the final results because the questions were not asked in the same manner as the other interviews. According to the final report on the completion of the Development Survey, the household survey was mostly conducted on weekdays and surveyors worked an average of 25 hours per week collecting data. They also attended weekly meetings to discuss concerns or problems, turn in completed survey forms, pick up new materials, and review timesheets. Also important, the weekly meetings were tools that the research coordinator used for ensuring questions were understood in a similar way by the surveyors and were asked in a standard fashion thus maintaining the validity and reliability of the survey.

The completion of the household survey also took twice as long as expected (two

months instead of one). Three main factors contributing to this delay, according to the research coordinator, were (1) the a need for repeated visits to homes especially in the larger communities of Cerro Plano, Monteverde, and Santa Elena, (2) the weekly meetings needed to coordinate the distribution of work among 12 surveyors and to troubleshoot problems that arose in the application of the survey which accounted for one lost morning of work each week, and (4) the length and detail of the survey which permitted surveyors to conduct a maximum of three surveys daily.

Table 3 shows both the initial sample size proposed, which was based on the estimates provided by the health clinic, and also the modified sample size obtained using MVI's population data. It also shows the survey completion rates for each of the nine communities included in the household survey.

Table 3: Household Development Survey Sample and Completion Results

Community	Total Households (EBAIS 2000)	Total Households (MVI 2001/2002)	Sample Size based on MVI household estimate	Completed Surveys (Participation Rate)	Not Home/ Refused to Participate or not a house
Cañitas	77	46 **	41	33 (81%)	8
Cerro Plano	81	211 *	136	91 (67%)	45
La Cruz	19	42 **	38	36 (95%)	2
La Lindora	24	36 **	33	30 (91%)	3
Los Llanos	41	59 **	53	53 (100%)	0
Monteverde	171	146 *	106	37 (35%)	69
Río Negro	14	14 **	14	5 (36%)	9
San Luis	73	99 **	89	63 (71%)	26
Santa Elena	342	311 *	204	184 (90%)	20
TOTALS	842	959	714	532 (75%)	182 (25%)

* MVI figures are based on house counts conducted by students in the Sustainable Futures scenario planning project. The data is more accurate than the EBAIS figures due to using exhaustive field methods to count and classify every structure. To date the housing counts have been carried out in Cerro Plano, Santa Elena and Monteverde. The inaccuracy of this data is in the classification of structures into one of three categories: residential, business or outdoor. Since students collecting the data are from the US and are not as familiar with the types of construction, some misclassification exists in the data. This inaccuracy was most pronounced in Monteverde, where a considerable number of structures classified as residential, were in fact workshops, storage sheds or abandoned housing.

** The housing estimates for the remaining communities (Cañitas, La Cruz, La Lindora, Los Llanos, Río Negro, and San Luis) are based on the surveyor's field work. Since household figures were not well established in these communities, surveyors were instructed to interview 9 out of every 10 houses in order to achieve an adequate sample size, except in Río Negro, where they were instructed to visit every house due to the small size of the community.

This table (prepared by the research coordinator) shows that overall participation rate in the household survey was 75% of the households targeted. The research coordinator's final report explained the low participation rates in Monteverde (35%) as resulting from a large number of residences being vacant or occupied by short term tenants during parts of the year (especially during the rainy season) as their owners, who live in the US or Europe, use them as secondary or vacation homes. The research coordinator also concluded, based on anecdotal and informally collected evidence, that

some Monteverde residents, especially those with roots going back into the 1950s and 1960s, have reached a saturation point with research conducted in their community. Consequently, they often refuse to participate in studies. I encountered similar anecdotes during my six week visit in the summer of 2001. The other community with low participation rates, Río Negro (36%), is described by the research coordinator as very small and also very guarded, mostly because of events in recent history which led to the dispossession of their lands and to the failure of community-based tourist enterprises. In fact, the interviewer assigned to this community reported to the research coordinator that the only reason she was able to complete surveys in five of the homes was because she was known to the community members. By contrast, success in many of the remaining communities was the result of great diligence and persistence by some of the native surveyors. The research coordinator lauded their organization and meticulousness, but also remarked that particularly important, especially in some of the smaller communities, was the fact that many of the native surveyors were already known by the residents.

There was also an ethical issue that arose during the administration of the household survey that concerned the identification of cases of domestic violence. Here is how the research coordinator explained the situation and its resolution in the final report:

One of the surveyors on this project was a participant in the Institute's (MVI's) lay health promoter program focused on family violence prevention in the mid- 1990s, and is therefore known by some in the community for her work supporting women in situations of domestic violence. In two instances women she was interviewing for the survey told her of problems with domestic violence. In both cases, she consulted with the project supervisor (research coordinator) about the issue and was asked to return to the house to secure permission from the woman to report the case to the clinic for follow-up by the social worker. In both cases, consent was granted and the Institute (MVI) provided written reports to the clinic's domestic violence prevention initiative. The women

were then invited to participate in support groups and their cases were given to the social worker at the clinic for follow-up.

I support the actions of the research coordinator and MVI and believe that these two instances of domestic violence were handled in an ethical manner.

Data Entry into SPSS

In October 2002, MVI moved one of its staff to help the research coordinators enter the survey data into SPSS. This process was completed by February at which time the research coordinator spent February to April checking the data for accuracy and recoding some of the numerous “other” selections particularly in the business survey. The data was sent to USF GRC in April and upon receiving it, I spent the summer of 2003 putting labels and cleaning up many of the fields. The management of this large data set was very challenging and the most time consuming activity that I engaged in during this research project. Also, some of the data was lost as I some of the categories did not match those on the survey instruments.

Monte Verde Zone Profile

This first section of the results, Monte Verde Zone Profile, will present the information collected from the household instrument of the Development Survey at the level of the Monte Verde Zone. That is, this section will not compare communities or profile specific communities but rather present the information collected for the entire Zone as defined in the earlier sections (nine communities).

As previously stated, the household instrument was meant to be conducted on a stratified (by community) random sample of households in the Monte Verde Zone to collect household level information. We also used the opportunity to ask the

respondents, who were answering questions on behalf of their households, survey questions that pertained only to them (not their households). These questions collected personal demographic information, as well as the respondents' opinions and attitudes on several issues. The information collected on this opportunistic sample of respondents in the Monte Verde Zone will be presented first. The information that pertains to households across the Monte Verde Zone will follow. Finally, the results for this section will be summarized.

Respondent Level Information for the Monte Verde Zone

First, I will look at the characteristics of the respondents that were surveyed to better understand who answered questions on behalf of their households.

Characteristics of Respondents

As Table 4 shows, for the Monte Verde Zone, the surveyors collected data from female respondents (73.5%) more often than from male respondents (26.5%).

Additionally, the average age of the respondents for the entire Monte Verde Zone was 49, with male respondents averaging 54 and female respondents averaging 48.

Table 4: Characteristics of Respondents by Gender

Characteristics of Respondents	Male	Female	Total
Gender (n=532)	26.5%	73.5%	100%
Average Age (n=531)	53.9	47.7	49.3
Self-describing as head of household (n=496)	77.3%	86.5%	84.2%
Not lived in the Zone since birth (n=532)	56.7%	56.0%	56.2%

Interestingly, this age difference was statistically significant on an independent samples t-test ($p < 0.001$), but it is not clear to what this difference is attributable. Also, of 391 female respondents 339 (86.7%) reported being the female head of household (ama de casa) whether married or single. Similarly, of the 141 male respondents 109 (77.3%) reported being head of household whether married or single. Further, 56.2% of respondents – 56.7% of males and 56.0% of females – reported not having lived in the Monte Verde Zone since birth.

Table 5 shows some of the common characteristics of respondents who have not lived in the Zone since birth.

Table 5: Respondents Who Have not lived in the Zone since Birth

Common Characteristics	
Came with family (n=291)	77.3%
Wants to stay permanently (n=299)	81.6%
From within Costa Rica (n=301)	89.0%
Came after 1992 (n=292)	50.0%
Came during the 1990s (n=292)	41.1%
Came during the 2000s (n=292)	19.2%

The majority of these respondents claimed to have come to the Zone with their family (77.3%) instead of by themselves (22.7%) and expressed a desire to stay in the Zone permanently (83.7%). When the respondents who reported not having lived in the Monte Verde Zone since birth were asked about their point of origin 89.0% reported that they were from within Costa Rica, and 11.0% reported that they were from outside of the country. For respondents coming from within Costa Rica, some of the more common points of origin are shown on Table 6. All of these areas, except for San Jose, are adjacent to the Monte Verde Zone. For respondents coming from outside of Costa Rica, the two most common points of origin were the US (18) and Nicaragua (8).

Table 6: Place of Origin

Common Places of Origin (n=301)	
Gaucimal	23
Tilaran	22
San Jose	20
Las Juntas de Abangares	19
San Carlos	18
US	18
Nicaragua	8

Further, 50% of respondents who claimed not to have lived in the Zone since birth came after 1992. In fact, 43.5% reported coming in the 1990s and 19.2% reported coming in the first three years of the 2000's keeping in mind that this data was collected in August and October 2002.

Table 7: Time of Arrival

Information on Time of Arrival	
Arrived after 1992	50.0%
Arrived in the 1990s	43.5%
Arrived in the 2000s	19.2%
Average Date of Arrival	1989.1

In summary, the results for the characteristics of respondents to the household instrument of the Development Survey are as follows:

- The majority of the respondents to the survey across the Monte Verde Zone are females (73.5%).
- The average age of the respondents was 49 with a statistically significant difference in the average age of the male (54) vs. female (48) respondents.
- The majority of male (77.3%) and female (86.7%) respondents described themselves as being the head of the household (amo o ama de casa) whether married or single.
- The majority of respondents (56.7%) throughout the Monte Verde Zone reported not having lived in the Zone since birth. These respondents also claimed to have come

- with their families (77.3%) instead of by themselves (22.7%).
- Further, 89% of respondents who have not lived in the Zone since birth reported that their point of origin was within Costa Rica, with many of these people coming from areas adjacent to the Monte Verde Zone.
 - And, 43.5% reported coming in the 1990s and 19.2% reported coming in the first three years of the 2000s, keeping in mind that this data was collected in August and October 2002.

Views on Development and Tourism

A Likert scale was used to gage the opinions of respondents on tourism and development, in general. The results are shown in Table 8. Most respondents reported having a generally positive view on development in the Zone. Respondents were also asked about their general opinions on tourism and how it affected the Monte Verde Zone. Similarly, the respondents' opinions on Tourism were mostly positive.

Table 8: Views on Development and Tourism

	Positive	Neutral	Negative
Development (n=522)	65.3%	19.2%	15.5%
Tourism* (n=521)	72.7%	13.8%	3.5%
* 3 respondents chose not to respond.			

There was a follow up, open-ended question, on respondents's opinions regarding tourism that asked about its positive and negative aspects. The responses were lengthy and varied (and all 532 participants had something to say) but one common theme is that everyone saw the positive aspect as being economical (brings jobs). The negative aspects were more varied but could probably be characterized as issues pertaining to cultural change. For example, many respondents mentioned the arrival of drugs, the change of

habits especially among young people, the rapid growth of the area, and environmental degradation.

Views on Community and Zone Governance

Respondents in the Monte Verde Zone surveyed were asked about their opinions regarding the governance of their particular communities and the Zone in general. As Table 9 shows that, responding in a Likert scale, the most common answer chosen by respondents throughout the Zone pertaining to their community's governance was somewhat satisfied, with not satisfied being the second most common response. Respondents were also asked about their opinions on governance in the Monte Verde Zone, in general, using the same Liker scale. Like the questions on community governance, the most common answer for the Zone was somewhat satisfied, with a higher percentage of not satisfied than in community governance. Interestingly, many respondents chose not to respond to these two questions.

Table 9: Views on Governance

	Very Satisfied	Satisfied	Somewhat Satisfied	Not Satisfied	No Response	Don't Know
Community Governance (n=503)	7.4%	16.7%	39.4%	19.1%	7.2%	10.3%
Zone Governance (n=486)	2.5%	12.6%	39.7%	24.5%	7.6%	13.2%

Views on Utilities and Services

Respondents were asked their opinions on the quality and availability of several utilities and services in the Monte Verde Zone. A Likert scale was used to record respondents' answers. The respondents could choose values from 1 through 3 with a value of zero recorded if the respondent indicated that the service was not available.

Table 10 illustrates the results:

Table 10: Opinions on Utilities and Services for the Monte Verde Zone

Utility or Service	Mean Score for Monte Verde Zone
Water (n=529)	2.32
Bus (n=528)	1.61
Taxi (n=523)	1.61
Paths (n=516)	1.05
Electricity (n=525)	2.34
Garbage (n=526)	1.79
Health (n=522)	1.90
Public Education (n=529)	1.94
Agricultural Land (n=523)	1.40
Credit (n=524)	1.79
Banks (n=526)	1.84
Telephone (n=525)	2.03
Recreation (n=523)	0.71
Psychological Therapy or Counseling (n=524)	0.75
Recycling (n=528)	1.83

As the Table 10 shows, respondents throughout the Zone were generally dissatisfied with the availability and quality of recreation, psychological therapy and counseling services, and walking paths. On the other hand, respondents throughout the Monte Verde Zone were most satisfied with water, electricity, and telephone services.

Participation in Public Services

Most respondents reported having no participation (48.7%) or just being interested observers (35.2%) in public services in the Monte Verde Zone. However, 7% of respondents for the entire Zone claimed to have formal participation in public services.

Transportation Results

Individual respondents were asked about their travel habits. As Table 11 shows, the majority of people in the Monte Verde Zone reported walking to work with various ways being the second most common answer.

Table 11: Transportation Used for Work

Most Common Modes (n=248)	
Walk	51.6%
Various	19.4%
Car	10.5%
Motorcycle	9.3%

As Table 12 shows, when respondents were asked about traveling outside of the Monte Verde Zone, the majority of people reported using the bus. Also, the majority of respondents in the Monte Verde Zone reported traveling outside of the Monte Verde Zone only a few times a year with monthly being the second most popular answer and less than once a year the third.

Table 12: Transportation Used to Travel Outside of Monte Verde Zone

Most Common Modes (n=530)	
Bus	61.3%
Various	18.1%
Car	17.7%
Most Common Frequencies (n=530)	
Few times a year	45.3%
Monthly or more	32.3%
Yearly or less	15.3%

As Table 13 shows, when asked about modes of transportation for travel within the Monte Verde Zone that was not related to work, the most common response chosen by survey participants was that they used various methods to get around. Other common responses included walking, car, and taxi. This result is interesting when compared to transportation used for work because people were more likely to walk when going to work than when just getting around. Respondent were also asked with what frequency they traveled around the Monte Verde Zone excluding any travel related to work. The most common response in the Zone was on a weekly basis with several times a week and monthly or more also common responses. Perhaps the selection of the weekly category

as most common occurred because the respondents tended to be people who were home on weekdays and largely female. Based on informal interviewing in 2001, in some of the smaller communities it appeared to be the case that *ama de casas* (the woman head of the household) did not work outside of the home but were busy in it. It appears though that daily travel is primary for work.

Table 13: Transportation Used to Travel within Monte Verde Zone

Most Common Modes (n=528)	
Various	37.5%
Walk	18.8%
Car	15.3%
Taxi	13.8%
Moto	5.7%
Most Common Frequencies (n=526)	
Weekly	38.0%
Several times a week	25.7%
Monthly or more	16.0%
Every day	12.2%

Sources of Information

The survey asked respondents about their principal sources of information and news. For the Monte Verde Zone, Table 14 shows that the most common answers given by respondents were through word of mouth, through the local news magazine, *Agua Pura*, and through various methods. Respondents were also asked to chose and ideal way to get information and news. Table 14 shows that for the Monte Verde Zone the most common answer for respondents was not to choose any principal method but rather to favor the answer various methods. The second most common answer was *Agua Pura*.

Table 14: Sources of Information

Most Common Sources of Information (n=521)	
Word of mouth	32.4%
<i>Agua Pura</i>	27.1%
Various	29.4%
Most Common Desired Sources of Information (n=527)	
Various	36.4%
<i>Agua Pura</i>	21.4%

Summary of Respondent Results

It is important to reiterate that the information presented in this section is obtained from the individuals who were answering questions on behalf of their households. Where the household level information is very representative of the Monte Verde Zone and the particular communities where the households are located, the individual results are obtained from what can best be described as an opportunistic sample of individuals. As such, it is important to note the characteristics of these individuals before summarizing the results.

- For the Monte Verde Zone, respondents to the household instrument of the Development Survey were mostly women (73.5%) in their late 40's (48 avg.; 54 avg. for men) who described themselves as head of household, *ama de casa*, 86.7%.
- The majority of respondents to the household instruments had not lived in the Monte Verde Zone since birth (56.7%).
- These respondents reported that they had come to the Zone with their families (77.3%) from somewhere within Costa Rica (89%). Most of these respondents came from adjacent communities.

With regards to opinions of development, governance, and tourism the following

results were recorded:

- Individual respondents in this opportunistic sample throughout the Zone reported having a positive view of development (65.3%) and tourism (72.8%).
- Respondents, however, were slightly less happy on a Likert scale with their community's governance, with only 39.4% selecting somewhat satisfied while 19.1% selected not satisfied, and with the Monte Verde Zone's governance, with 39.7% selecting somewhat satisfied while 24.5% selected not satisfied.

While individual respondents support development and tourism, they are not as supportive of their local governments.

When asked about public services and utilities the following results were recorded:

- Respondents throughout the Monte Verde Zone reported being happy with their water, electricity, and telephone services and unhappy with the availability of recreation, psychological therapy and counseling services, and walking paths.
- Most respondents also reported not to have any involvement (48.7%) or to only be interested observers (35.2%) with public services.

With regards to ways in which respondents obtain information, the following results were obtained:

- Word of mouth also plays an important role in the Monte Verde Zone as 32.4% of respondents reported that this was the primary means through which they obtained information.
- The publication *Agua Pura* was the second most common means of acquiring information (27.1%).

- Respondents also reported that they would like to get information through various ways with *Agua Pura* being the second most common response.

Finally, with regards to the way in which people get around in the Monte Verde Zone, the following results were recorded:

- The majority of respondents (51.6%) reported walking to work.
- Respondents also reported that when traveling outside of the Monte Verde Zone, which most of them do either a few times a year (45.3%) or monthly (32.3%), they ride the bus (61.3%).
- For travel within the Zone that is not related to work, respondents reported that they use various methods (37.5%) with car or SUV (15.3%) and taxi (13.8%) also being common answers. These respondents claimed to travel within the Monte Verde Zone about once a week (38.0%) with several times a week (25.7%) the second most common response.

Household Level Information for the Monte Verde Zone

The information presented here is much more representative than the results presented in the individual results section. The reason for this is that the sample we collected was a sample of households not individuals. The only caveat here is that two of the communities, Monteverde and Rio Negro, had low completion rates so representativeness is not insured.

Household Composition

The average household size in the Monte Verde Zone is 4.02. Interestingly, a very small percentage of households (5.7%) in the Monte Verde Zone reported having at least some members that do not reside in the Zone all year long but rather only part of the

year. Also, 15 of these 22 households (68%) that reported having some members who do not permanently reside in the Monte Verde Zone cited work as the reason for the seasonal of temporary absence of some household members.

Household Employment

The data for salary was collected using intervals instead of exact quantities for ethical reasons. The 8 equal intervals were chosen by MVI. At the time this data was collected the exchange rate was about 360 colones to 1 dollar. The intervals were of 30,000 colones, which was the equivalent of \$33.33. The 9th interval was 240,000 colones or more, which was the equivalent of \$666.67 dollars a year. Out of 1169 reported salaries for the 532 households the 9th interval was only chosen 43 times or 3.7%.

Table 15: Employment Characteristics of Monte Verde Zone Households

Common Characteristics of Households	
Average household size (n=526)	4.02
Working adults per household (n=497)	1.56
Annual household income (n=482)	164221.1 colones or 456.17 dollars
Average income per adult (n=467)	108,350.6 colones or 300.97 dollars

As Table 15 shows for the Monte Verde Zone, the mean annual household income is 164,221.1 colones, which is \$456.17. Further, these results could be broken down into yearly income per adult. For the Zone, the average working adult earns 108,350.6 colones or \$301. The average number of working adults in households across the Zone has 1.56 working adults. I must add that I have no way of knowing if these results are very accurate. It is conceivable that respondents are underreporting the amount of money their households earn. However, I will take the results at face value because this is what respondents reported.

Further, Table 16 organizes the results by number of working adults in the household. As expected, the ratio of working adults to household members decreases with more working adults. The salaries per working adult also decrease with more working adults. This probably means that households with more working adults probably have working young adults (who typically earn less). It also means that households with younger children (nuclear family), which are purportedly common in the Zone, have the highest ratio of household members per working adult. They are in greater relative poverty.

Table 16: Characteristics of Households by Number of Working Adults

	1 Working Adult (45.5%)	2 Working Adults (34.0%)	3 Working Adults (7.0%)	4 Working Adults (1.9%)	5 Working Adults (0.8%)
Number of household residents (n=492)	3.72	4.03	5.70	6.60	6.75
Ratio of working adults to household residents (n=492)	1 to 3.72	1 to 2.02	1 to 1.9	1 to 1.65	1 to 1.35
Total Household Income (n=482)	116630.80 or \$323.97	210915.60 or \$585.88	243646.90 or \$676.80	314997.90 or \$874.99	374997.30 or \$1041.66
Income per working adult (n=467)	116630.80 or \$323.97	105457.80 or \$292.94	81215.80 or \$225.60	78249.48 or \$217.36	74999.45 or \$208.33

Respondents in the Monte Verde Zone were asked about the benefits that tourism has brought to their household. Table 17 shows that the majority of households reported having benefited by procuring employment that is linked to tourism in the Monte Verde

Zone. When respondents were asked about the kinds of employment, 39.4% reported that someone in their household obtained full-time employment resulting from tourism, 7.7% reported that someone in their household obtained part-time employment resulting from tourism, and 26.4% reported that someone in their household obtained seasonal employment resulting from tourism.

Table 17: Tourism and Employment

Households procuring employment from Tourism (n=493)	
Employment	71.0%
Full-time employment	39.4%
Part-time employment	7.7%
Seasonal employment	26.4%

As the literature suggested that agriculture has been supplanted by ecotourism as an employer in the Monte Verde Zone, the survey asked if the household engaged in any form of farming activity, whether employment or subsistence farming, exclusively or as a supplement. As Table 18 shows, about one fifth of households engage in farming activities of any kind. This is much smaller than the 71.0% of households that procure employment from tourism. Some farming activities that households engaged in throughout the Zone included dairy cattle and vegetable farming, with 47.1% of farming household engaging in several different farming activities. Also, Table 18 shows that the majority of farming households reported having enough land for their farming activities. A majority of farming households also reported owning the land that they were utilizing for their farming activities.

Table 18: Farming Households

Characteristics of Households engaged in Farming Activities	
Households engaged in farming activities (n=532)	19.5%
Engaged in dairy farming (n=104)	21.2%
Engaged in vegetables Farming (n=104)	24.0%
Engaged in various activities (n=104)	47.1%
Own land used (n=103)	64.1%
Have enough land for needs (n=93)	74.1%

Home Ownership

As Table 19 shows, the majority of people in the Monte Verde Zone own their house or place of residence. For those households that were not owned by the residents, the majority were rented. The majority of respondents who rented stated that the owners of the rental properties they were living in were Costa Rican Nationals. Most of these Costa Rican Nationals also lived in the Monte Verde Zone. This indicates a high degree of local ownership (even of rental property) which, in the literature, is important for successful ecotourism.

Table 19: Home Ownership in the Monte Verde Zone

Home Ownership Information	
Own House (n=532)	73.3%
Rent House (n=532)	19.9%
Landlords are Costa Rican nationals residing in Zone (n=106)	71.7%
Landlords are Costa Rican residing outside of Zone (n=106)	14.2%

Household Vehicles

As Table 20 shows, the majority of households in the Monte Verde Zone reported having a means of transportation, including motorized vehicles, bicycles, horses, and other. But, the average number of vehicles or means of transportation owned per household for the entire Monte Verde Zone per household was less than 1. When it

comes to motorized vehicles, the majority of respondents throughout the Zone reported not having an auto or SUV. Similarly, most households also did not own motorcycles or ATV.

Table 20: Household Transportation

Household Transportation Information	
Any Means of Transportation (n=532)	54.9%
Cars or SUV (n=532)	30.5%
Motorcycles (n=532)	22.9%
ATVs (n=532)	4.9%
Average number of vehicles or means of transportation per household (n=532)	0.77

Household Computers

Only 15.8% of households in the Monte Verde Zone have computers.

Additionally, for the households that have computers, 52.4% have internet access (8.3% of all households).

Summary of Household Results

The supposed ongoing shift in the economy of the area from agrarian to service sector is evident in these results. At the level of the entire Zone, more households depend on the tourism economy for their employment (71.0%) than engage in any kind of farming activity (19.5%). But about a third of household procuring employment from tourism (26.4% of all households) only procure seasonal employment. Further, the average household of four has a self-reported average yearly household income of 164221.1 colones or \$456.17. That household of four is living on less than \$2 a day. I could not find any directly comparable statistics of households in the World Bank or United Nations reports, but according to World Bank statistics, in 2002 approximately 26% of people in Costa Rica lived on less than \$2 a day. That means that if the self-

reported income levels are accurate, household in the Monte Verde Zone are probably some of the poorest in Costa Rica.

Most of the households in the Zone own their place of residence 73.3%. Ownership of rental properties is also mostly in the hands of Costa Rican nationals (82.4% of renters surveyed reported that their landlord was a Costa Rican national). However, ownership of any kind of means of transportation, including animals, was barely over half (54.9%) with the majority of households not owning cars or SUVs (69.5%).

Summary of Monte Verde Zone Results

The majority of respondents surveyed (56%) were not originally from the Monte Verde Zone. Importantly, these individuals have come to the Monte Verde Zone from within Costa Rica (89%), mostly from surrounding areas, with a few coming from foreign countries like Nicaragua or the United States. Individual respondents in this opportunistic sample throughout the Zone reported having a positive view of development (65.3%) and tourism (72.8%). Many respondents thought that tourism's main benefit related to employment opportunities while its draw backs related to changes it produces, such as drugs coming into the area or young people changing their habits. As more positive responses were recorded on the Likert scale, it is probably the case that respondents are, at this point, more satisfied with the benefits than upset by the draw backs of the ongoing rapid development. It is important to note that more than half of these respondents migrated to the Zone seeking the jobs generated by ecotourism. Interestingly, during my cite visit in 2001, many Costa Ricans complained about the influx of Nicaraguans to the area. During an informal conversation, someone suggested

that perhaps they are occupying agricultural jobs that the Costa Ricans are leaving for tourism jobs. With so many people moving to the Monte Verde Zone from adjacent areas, the informant's speculative comment seems plausible.

Respondent's were also not as satisfied with community and Zone governance as they were with development and tourism. Only 39.4% were somewhat satisfied with community governance while 19.1% selected not satisfied. With regards to Zone governance, 39.7% selected somewhat satisfied while 24.5% selected not satisfied. It is important to reiterate that many respondents chose not to answer these questions.

When asked about public services and utilities, respondents throughout the Monte Verde Zone reported being happy with their water, electricity, and telephone services and unhappy with the availability of recreation, psychological therapy and counseling services, and walking paths. Most respondents also reported not to have any involvement (48.7%) or to only be interested observers (35.2%) with public services.

Most of the households in the Monte Verde Zone now rely on the tourism economy for employment (71%), with very few households relying partially or exclusively on agrarian activities (19.5%). The average household of four has a self-reported average yearly household income is 164221.1 colones or \$456.17 and is, therefore, living on less than \$2 a day. In the absence of directly comparable measures from the World Bank or United Nations reports, World Bank statistics in 2002 show that approximately 26% of people in Costa Rica live on less than \$2 a day. That means that if the self-reported income levels are accurate, household in the Monte Verde Zone are probably some of the poorest in Costa Rica.

Households tend to own their place of residence 73.3%. Ownership of rental

properties is also mostly in the hands of Costa Rican nationals (82.4% of renters surveyed reported that their landlord was a Costa Rican national). However, ownership of any kind of means of transportation, including animals, was barely over half (54.9%) with the majority of households not owning cars or SUVs (69.5%).

Community Comparisons

Having presented the data for the whole Monte Verde Zone, this section will now break down the data by communities. The communities will be compared to determine if there are significant differences. Patterns that emerge will be discussed.

Respondent Level Comparisons

This section will report the results for the individual level information collected from respondents while gathering household level information. One important issue to consider is whether there were significant differences across communities in the characteristics of the respondents answering the household instrument of the development survey. After differences in characteristics have been analyzed, significant differences in the respondents' opinions and attitudes will be analyzed in the preceding section.

Comparisons of Characteristics of Respondents

As previously mentioned, the results of the household survey show that, for the Monte Verde Zone, the surveyors collected data primarily from female respondents (73.5%). The results are shown on Table 21. A chi-square analysis demonstrates that this percentage was consistent throughout the nine communities or that there was no significant difference in the rates of male to female respondents ($p=0.779$).

Table 21: Gender of Respondents by Communities

Community	Male		Female		Total	
Santa Elena	45	24.5%	139	75.5%	184	100.0%
Cerro Plano	22	24.2%	69	75.8%	91	100.0%
Monteverde	12	32.4%	25	67.6%	37	100.0%
San Luis	19	30.2%	44	69.8%	63	100.0%
La Cruz	8	22.2%	28	77.8%	36	100.0%
Canitas	12	36.4%	21	63.6%	33	100.0%
La Lindora	9	30.0%	21	70.0%	30	100.0%
Los Llanos	12	22.6%	41	77.4%	53	100.0%
Rio Negro	2	40.0%	3	60.0%	5	100.0%
Total (n=532)	141	26.5%	391	73.5%	532	100.0%

Additionally, the average age of the respondents for the entire Monte Verde Zone was 49 with male respondents averaging 54 and female respondents averaging 48. The difference between the ages of male and female respondents for the Monte Verde Zone is statistically significant in an independent samples t-test with a $p < 0.001$. I am not sure as to the importance of this difference except that it may have to do with the types of respondents that are available to be interviewed or with a significant difference in age between males and females spouses in a particular community. As Table 22 shows, the average age of respondent was also significantly different across communities on a One-Way ANOVA ($p < 0.001$). The two most populous communities, Santa Elena and Cerro Plano (both on the main road), had the lowest average ages (along with Los Llanos which is adjacent to Santa Elena and also on the main road).

Table 22: Average Age by Communities

Community	Average Age
Santa Elena	46.77
Cerro Plano	48.03
Monteverde	54.74
San Luis	54.31
La Cruz	48.64
Canitas	50.23
La Lindora	56.17
Los Llanos	45.92
Rio Negro	58.50
Total (n=531)	49.33

As previously reported, of 391 female respondents 339 (86.7%) reported being the female head of household (ama de casa) whether married or single. Similarly, of the 141 male respondents 109 (77.3%) reported being head of household whether married or single. This observed pattern appeared very consistent across communities.

Further, 56.2% of respondents – 56.7% of males and 56.0% of females – reported not having lived in the Monte Verde Zone since birth. This difference between male and female respondents was not significant in a chi-square analysis across communities.

However, there was a significant difference when comparing rates of respondents who have lived in the Monte Verde Zone since birth across the nine communities ($p < 0.001$). As Table 23 shows, in the communities that are located on the main road from the Pan-American Highway to the Monteverde Cloud Forest Preserve, Santa Elena, Cerro Plano, Monteverde, and Los Llanos, the majority of respondents had not lived in the Monte Verde Zone since birth. The other communities showed mixed results. It is important to reiterate that the completion rate for Monteverde was only 35% and that this was possibly the result of this community being over-studied, so the high rate of non-native respondents is probably elevated.

Table 23: Lived in the Zone since Birth across Communities

Community	Yes		No		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Santa Elena	66	35.9%	118	64.1%	184	100.0%
Cerro Plano	42	46.2%	49	53.8%	91	100.0%
Monteverde	7	18.9%	30	81.1%	37	100.0%
San Luis	34	54.0%	29	46.0%	63	100.0%
La Cruz	21	58.3%	15	41.7%	36	100.0%
Canitas	14	42.4%	19	57.6%	33	100.0%
La Lindora	23	76.7%	7	23.3%	30	100.0%
Los Llanos	24	45.3%	29	54.7%	53	100.0%
Rio Negro	2	40.0%	3	60.0%	5	100.0%
Total (n=532)	233	43.9%	299	56.2%	532	100.0%

There was also no significant difference in a chi square across the nine communities in the number of respondents who had not lived in the Zone since birth, and who also claimed to have come to the Zone with their family (77.3%) instead of by themselves (22.7%) and expressed a desire to stay in the Zone permanently (83.7%).

Finally, when respondents who reported not having lived in the Monte Verde Zone since birth were asked about their point of origin, 89.0% reported that they had come from within Costa Rica and 11.0% claimed to have come from outside of the country. Table 24 shows the results. The rate was significantly different on a chi square across communities ($p < 0.001$) mostly because of Monteverde, where only 46.7% of residents reported being from within Costa Rica, while 53.3% reported being from outside Costa Rica. In informal interviewing before the Development Survey, key informants commented on the high number of retirees and foreign researchers living in Monteverde. But the results must be taken with caution given that this community had the lowest completion rate.

Table 24: Place of Origin by Community

Community	Within Costa Rica		Outside Costa Rica		Total	
Santa Elena	111	93.3%	8	6.7%	119	100.0%
Cerro Plano	46	92.0%	4	8.0%	50	100.0%
Monteverde	14	46.7%	16	53.3%	30	100.0%
San Luis	28	96.6%	1	3.4%	29	100.0%
La Cruz	13	86.7%	2	13.3%	15	100.0%
Canitas	17	89.5%	2	10.5%	19	100.0%
La Lindora	7	100.0%	0	0.0%	7	100.0%
Los Llanos	29	100.0%	0	0.0%	53	100.0%
Rio Negro	3	100.0%	0	0.0%	3	100.0%
Total (n=301)	268	89.0%	33	11.0%	301	100.0%

Further, for the Monte Verde Zone, 50% of people reporting not to have lived in the Zone since birth came after 1992. In fact, 41.1% reported coming in the 1990's and 19.2% reported coming in the first three years of the 2000's keeping in mind that this data was collected in August and October. Table 25 shows the average date of arrival by community. Interestingly, there was no significant difference on a one-way ANOVA in the average date of arrival (which was 1989 for the Zone) across the nine communities.

Table 25: Average Year of Arrival

Community	Average Year of Arrival
Santa Elena	1991.01
Cerro Plano	1989.31
Monteverde	1983.86
San Luis	1985.40
La Cruz	1991.29
Canitas	1987.00
La Lindora	1990.14
Los Llanos	1990.37
Rio Negro	1976.67
Total (n=292)	1989.06

In summary, the results for the comparisons of the characteristics of respondents across the nine communities in the household instrument of the development survey are as follows:

- The percentage of female respondents across the nine communities was consistent at

about 73.5%.

- There was a significant difference in the ages of the respondents across the nine communities, with younger respondents in populous communities along the main road.
- The proportion of male (77.3%) and female (86.7%) respondents describing themselves as being the head of the household (amo o ama de casa) whether married or single was consistent across the nine communities.
- There was significant difference in the rates of respondents who reported not having lived in the Zone since birth across the nine communities with communities along the main road near the MCFP (Los Llanos, Santa Elena, Cerro Plano) having a majority of non-native residents. The other communities showed mixed results.

Comparisons of Respondents' Opinions and Attitudes

In this section, the results comparing respondents' views across the nine communities will be presented. These comparisons are based on the opinions of the individual respondents; this is not a household comparison except in so far as the respondent may represent the views of a particular household (not likely).

Comparison of Views on Development

Previously, it was reported that when respondents were asked about their general opinion regarding development in the Monte Verde Zone most of the respondents across the Zone reported having a generally positive view (65.3%) with a smaller portion having a neutral (19.2%) or negative (15.5%) view. However, there was a significant difference between communities in a chi-square ($p < 0.001$). Table 26 shows the results. There were only two communities where the amount of respondents reporting a positive view was

less than 50%, Monteverde and Los Llanos. Most of the other communities have positive percentages around 70%. One possible reason for these results (at least in Monteverde) might be the large number of foreign residents living in Monteverde. Also, the Monteverde Institute, as it is very active in promoting conservation awareness and holds many lectures that are open to the community on issues of development and conservation, might partially account for these results.

Table 26: Views on Development by Community

Community	Positive		Neutral		Negative		Total	
Santa Elena	124	68.9%	21	11.7%	35	19.4%	180	100.0%
Cerro Plano	63	70.0%	18	20.0%	9	10.0%	90	100.0%
Monteverde	9	25.0%	17	47.2%	10	27.8%	36	100.0%
San Luis	46	75.4%	11	18.0%	4	6.6%	61	100.0%
La Cruz	26	74.3%	2	5.7%	7	20.0%	35	100.0%
Canitas	23	71.9%	5	15.6%	4	12.5%	32	100.0%
La Lindora	19	63.3%	9	30.0%	2	6.7%	30	100.0%
Los Llanos	26	49.1%	17	32.1%	10	18.9%	53	100.0%
Rio Negro	5	100.0%	0	0.0%	0	100.0%	5	100.0%
Total (n=522)	341	65.3%	100	19.2%	81	15.5%	522	100.0%

Comparison of Participation in Public Services

In previous sections, the results show that most respondents reported having no participation or just being interested observers in public services in the Monte Verde Zone. There was no apparent difference observed among communities. San Luis was the only community that showed anything that fell out of the expected pattern with 31.7% of households reporting to have an “other” form of participation among the choices that were given. There is no information collected on the survey that could elucidate what this other form is.

Comparisons of Sources of Information

The survey asked respondents about their principal sources of information and

news. To reiterate, for the Monte Verde Zone the most common answers given by respondents were through word of mouth (32.4%), through the local news magazine *Agua Pura* (27.1%), and through various methods (29.4%). However, there was a significant difference between communities on a chi-square ($p < 0.001$), as *Agua Pura* was popular only in communities that were along the main road with the exception of Monteverde (communities like Los Llanos, Santa Elena, Cerro Plano). Table 27 shows the results. As Monteverde is the community that has the highest percentage of non-Costa Rican residents, this might indicate that *Agua Pura* is a publication read by residents of Costa Rican origin along the main road communities.

Table 27: Sources of Information by Community

Community	Word of Mouth		<i>Agua Pura</i>		Various		8 other categories		Total	
Santa Elena	52	29.1%	61	34.1%	53	29.6%	13	7.2%	179	100.0%
Cerro Plano	17	18.9%	22	24.4%	35	38.9%	16	17.8%	90	100.0%
Monteverde	11	30.5%	2	5.6%	19	52.8%	4	11.1%	36	100.0%
San Luis	19	31.1%	2	3.3%	30	49.2%	10	16.4%	61	100.0%
La Cruz	30	83.3%	6	16.7%	0	0.0%	0	0.0%	36	100.0%
Canitas	11	33.3%	8	24.3%	8	24.2%	6	18.2%	33	100.0%
La Lindora	17	56.7%	6	20.0%	2	6.7%	5	16.6%	30	100.0%
Los Llanos	10	19.6%	34	66.7%	3	5.9%	4	7.8%	51	100.0%
Rio Negro	2	40.0%	0	0.0%	3	60.0%	0	0.0%	5	100.0%
Total (n=521)	169	32.4%	141	27.1%	153	29.4%	58	11.1%	521	100.0%

Additionally, it was previously reported that respondents across the Monte Verde Zone were also asked to choose an ideal way to get information and news. The most common answer for respondents was not to choose any principal method but rather to favor the answer various methods (36.4%). The second most common answer was *Agua Pura* (21.4%). This again showed a significant difference between communities ($p < 0.001$) with the *Agua Pura* being more popular in Santa Elena and Los Llanos.

Comparisons of Transportation Results

In previous sections, individual respondents were asked about their travel habits. The majority of people in the Monte Verde Zone reported walking to work (51.6%) with various ways (19.4%) being the second most common answer. The difference between communities approached significance on a chi-square. All communities had high percentages of respondents walking (all but two above 50%).

When respondents were asked about traveling outside of the Monte Verde Zone the majority of people reported using the bus (61.3%). However, there was a significant difference between communities in a chi-square ($p < 0.001$). Table 28 shows the results. Monteverde and San Luis had relatively smaller percentages of respondents using the bus exclusively. Instead, respondents in these two communities reported using various methods at a much higher rate than other communities.

Table 28: Common Means and Frequency of Travel outside the Zone

Community	Bus		Car		Various	
Santa Elena	120	65.6%	32	17.5%	25	13.7%
Cerro Plano	58	63.7%	18	19.8%	12	13.2%
Monteverde	14	37.8%	8	21.6%	14	37.8%
San Luis	24	38.1%	6	9.5%	32	50.8%
La Cruz	24	68.6%	3	8.6%	8	22.9%
Canitas	23	69.7%	7	21.2%	2	6.1%
La Lindora	21	70.0%	8	26.7%	0	0.0%
Los Llanos	39	73.6%	10	18.9%	2	3.8%
Rio Negro	2	40.0%	2	40.0%	1	20.0%
	Yearly or Less		Few Times a Year		Monthly or more	
Santa Elena	21	11.5%	84	45.9%	64	35.0%
Cerro Plano	10	11.0%	32	35.2%	39	42.9%
Monteverde	4	10.8%	16	43.2%	11	29.7%
San Luis	17	27.0%	39	61.9%	7	11.1%
La Cruz	3	8.6%	17	48.6%	15	42.9%
Canitas	2	6.1%	15	45.5%	13	39.4%
La Lindora	10	33.3%	13	43.3%	5	16.7%
Los Llanos	13	24.5%	23	43.4%	14	26.4%
Rio Negro	1	20.0%	1	20.0%	3	60.0%

Also, Table 28 shows that the majority of respondents in the Monte Verde Zone reported traveling outside of the Monte Verde Zone only a few times a year, with monthly being the second most popular answer and less than once a year the third. There was a significant difference between communities in a chi-square ($p < 0.001$) with Cerro Plano respondents deviating from expected frequencies as the most common answer chosen was monthly. There is no information collected in this survey that explains the Cerro Plano results.

When asked about modes of transportation for travel within the Monte Verde Zone that was not related to work, the most common response chosen by survey participants was that they used various methods to get around (37.5%). Other common responses included walking (18.8%), car (15.3%), and taxi (13.8%). However, there was a significant difference between communities in a chi-square ($p < 0.001$). Table 29 shows these results. Respondents in Santa Elena, Cerro Plano, and Los Llanos, some of the more populous communities on the main road, reported walking in relatively higher rates than the other communities. These communities also reported relatively higher rates of use of taxis. Finally, respondents in San Luis and La Lindora were the only ones that reported hitching rides in milk trucks (27.0% and 13.3% respectively).

Table 29: Common Means and Frequency of Travel inside the Zone

Community	Walk		Taxi		Car		Various	
Santa Elena	47	26.0%	25	13.8%	28	15.5%	67	37.0%
Cerro Plano	15	16.5%	24	26.4%	13	14.3%	33	36.3%
Monteverde	2	5.6%	2	5.6%	6	16.7%	23	63.9%
San Luis	4	6.3%	0	0.0%	5	7.9%	28	44.4%
La Cruz	1	2.8%	0	0.0%	1	2.8%	31	86.1%
Canitas	3	9.1%	3	9.1%	8	24.2%	11	33.3%
La Lindora	6	20.0%	8	26.7%	7	23.3%	1	3.3%
Los Llanos	21	39.6%	11	20.8%	10	18.9%	2	3.8%
Rio Negro	0	0.0%	0	0.0%	3	60.0%	2	40.0%
	Monthly or more		Weekly		Several Times a Week		Everyday	
Santa Elena	22	12.2%	52	28.9%	66	36.7%	31	17.2%
Cerro Plano	11	12.1%	47	51.6%	15	16.5%	15	16.5%
Monteverde	2	5.6%	13	36.1%	18	50.0%	1	2.8%
San Luis	22	34.9%	19	30.2%	1	1.6%	2	3.2%
La Cruz	7	20.0%	17	48.6%	9	25.7%	1	2.9%
Canitas	5	15.2%	10	30.3%	11	33.3%	5	15.2%
La Lindora	8	26.7%	11	36.7%	7	23.3%	0	0.0%
Los Llanos	7	13.2%	30	56.6%	5	9.4%	8	15.1%
Rio Negro	0	0.0%	1	20.0%	3	60.0%	1	20.0%

Respondent were also asked with what frequency they traveled around the Monte Verde Zone excluding any travel related to work. The most common response in the Zone was on a weekly basis (38.0%), with several times a week (25.7%) and monthly or more (16%) also common responses. There were significant difference between communities on a chi-square ($p < 0.001$). Table 29 shows the results. San Luis's most common response category, for example, was monthly while respondents in communities like Monteverde, Santa Elena, and Canitas most commonly chose the several times a week category.

Comparisons of Views on Governance

Respondents in the Monte Verde Zone surveyed were asked about their opinions regarding the governance of their communities. Responding in a Likert scale, the most

common answer chosen by respondents throughout the Zone was somewhat satisfied (39.4%). Table 30 shows these results by community. Comparing communities a one-way ANOVA showed a significant difference between communities ($p < 0.001$) in opinions about their community's governance. In a Scheffe post-hoc test, the multiple comparisons showed San Luis with its highest approval average as significantly different from the lower approval averages in Santa Elena and Cerro Plano.

Table 30: Opinions on Community Governance by Community

Community	Average Opinion
Santa Elena	1.82
Cerro Plano	2.16
Monteverde	2.32
San Luis	2.77
La Cruz	2.33
Canitas	2.04
La Lindora	2.03
Los Llanos	2.17
Rio Negro	1.80
Total (n=415)	2.15

Respondents were also asked about their opinions on governance of the Zone using the same Liker scale. Like the questions on community governance, the most common answer for the Zone was somewhat satisfied (39.7%). Table 31 shows these results by community. Using a one-way ANOVA to compare mean satisfaction (ordinal data) there was a significant difference between communities ($p = 0.004$). However, a post-hoc Scheffe test was unable to determine which communities were significantly different. San Luis once again showed the highest mean satisfaction of the nine communities, with Rio Negro, La Cruz, and Monteverde showing the lowest.

Table 31: Opinions on Zone Governance by Community

Community	Average Opinion
Santa Elena	1.87
Cerro Plano	1.84
Monteverde	1.79
San Luis	2.29
La Cruz	1.59
Canitas	2.04
La Lindora	2.17
Los Llanos	1.91
Rio Negro	1.40
Total (n=385)	1.91

Comparison of Views on Tourism

Respondents in the Monte Verde Zone were also asked about their general opinions on tourism and how it affected the Monte Verde Zone. The most common answer given by respondents in the Zone was somewhat positive (40.9%) with very positive the second most common (31.9%). On a one-way ANOVA there was a significant difference between communities ($p=0.004$). A Scheffe post-hoc test was unable to differentiate communities that were significantly different from each other. San Luis had the least positive opinions, with Rio Negro, La Cruz, and Monteverde having the most positive opinions.

Table 32: Opinions on Tourism by Community

Community	Average Opinion
Santa Elena	2.01
Cerro Plano	1.73
Monteverde	2.35
San Luis	2.03
La Cruz	2.33
Canitas	1.88
La Lindora	2.34
Los Llanos	2.55
Rio Negro	1.20
Total (n=510)	2.07

Comparisons of Views on Utilities and Services

Respondents were asked their opinions on the quality and availability of several utilities and services in the Monte Verde Zone. A Likert scale was used to record respondents' answers. The scale contained three values: 1 was for inadequate, 2 was for adequate, and 3 was for more than adequate. A value of zero was recorded if the respondent indicated that the service was not available. Table 33 below illustrates the results:

Table 33: Opinions on Utilities and Public Services by Community

Utility or Service	Mean Score for Monte Verde Zone	p values for Differences Between Communities
Water	2.32	0.001*
Bus	1.61	<0.001*
Taxi	1.61	<0.001*
Paths	1.05	<0.001*
Electricity	2.34	<0.001*
Garbage	1.79	<0.001*
Health	1.90	0.062
Public Education	1.94	<0.001*
Agricultural Land	1.40	0.012*
Credit	1.79	0.007*
Banks	1.84	<0.001*
Telephone	2.03	<0.001*
Recreation	0.71	<0.001*
Psychological Therapy or Counseling Services	0.75	<0.001*
Recycling	1.83	<0.001*

* p values are significant on a one-way ANOVA

As the Table 33 shows, respondents throughout the Zone were generally dissatisfied with the availability and quality of recreation, psychological therapy and counseling services, and walking paths. On the other hand, respondents throughout the Monte Verde Zone were most satisfied with water, electricity, and telephone services. It is important to note, however, that there were significant differences in satisfaction with

the utility and services across the nine communities for every service that we asked about except for health related services.

Scheffe post-hoc tests were used to identify which respondents' opinions were different. The differences between communities were as follows:

- For water, respondent's opinions in La Cruz (2.09) and San Luis (2.18) on the low end were significantly different from Rio Negro (2.80) on the high end.
- For bus, the results were not clear as the Scheffe post-hoc test grouped the nine communities into four overlapping groups. The communities with the lowest values, however, were La Cruz (0.83), San Luis (1.03), and Rio Negro (1.20) while the communities with the highest values were Santa Elena (1.63), Cerro Plano (1.86), Los Llanos (1.94), Canitas (1.97), and La Lindora (2.00).
- For taxi, respondents' opinions in La Cruz (0.97) on the low end were significantly different from Cerro Plano (1.93), Rio Negro (2.00), and La Lindora (2.03) on the high end.
- For walking paths, respondents' opinions in La Cruz (0.50) on the low end were significantly different from Monteverde (1.29) and San Luis (1.61) on the high end. Additionally, San Luis (1.61) was also significantly different from Santa Elena (0.89) and Canitas (0.88).
- For electricity, respondents' opinions in San Luis (1.70) and La Lindora (1.97) on the low end were significantly different from Cerro Plano (2.64) and La Cruz (2.69) on the high end.
- For garbage, respondents' opinions in San Luis (with a value that approaches zero) were significantly different from all of the communities. Rio Negro (1.20) and La

- Lindora (1.50) on the low end were significantly different from Cerro Plano (2.27) and La Cruz (2.36) on the high end.
- For public education, respondents' opinions in San Luis on the low end (1.33) were significantly different from Cerro Plano (2.05), Canitas (2.07), Los Llanos (2.10), and Santa Elena (2.10) on the high end.
 - For agricultural land, the Scheffe post-hoc test could not differentiate the communities. Respondent's opinions in San Luis (1.09), La Lindora (1.16), and La Cruz (1.20) were at the bottom while Monteverde (1.63), Santa Elena (1.65), and Cerro Plano (1.72) were at the top.
 - For credit, the Scheffe post-hoc test could not differentiate the communities. Respondents' opinions in Canitas (1.35), San Luis (1.65), Rio Negro (1.67), and La Lindora (1.69) were at the low end while Santa Elena (1.91) and Cerro Plano (2.06) were at the high end.
 - For banks, the Scheffe post-hoc test could not differentiate the communities. Respondents' opinions in Canitas (1.36), Monteverde (1.59), and San Luis (1.62) were at the low end while Rio Negro (2.00) and Cerro Plano (2.06) were at the high end.
 - For telephone, respondents' opinions in San Luis (1.00) at the low end were significantly different from all of the other communities.
 - For recreation, respondents' opinions in La Cruz (0.14) at the low end were significantly different from Monteverde (1.18) and Los Llanos (1.39) at the high end.
 - For psychological therapy or counseling services, respondents' opinions in Rio Negro (0.20) and San Luis (0.26) on the low end were significantly different from La

- Lindora (1.48) and Los Llanos (1.58) on the high end.
- Finally, for recycling, respondent's opinions in San Luis (0.42) and Rio Negro (1.00) on the low end were significantly different from Los Llanos (1.96), Monteverde (1.97), Santa Elena (2.04), Cerro Plano (2.20), and La Cruz (2.42).

Summary of Respondent Level Comparisons

Individuals across these nine communities sampled in the Monte Verde Zone did show some significant differences. There was a significant difference between communities on the percentage of individuals interviewed who were not originally from the Zone. The communities along the main road, Santa Elena (64.1%), Cerro Plano (53.8%), Monteverde (81.1%), and Los Llanos (54.7%), tallied a majority of non-native respondents, while communities not on the main road showed mixed results. This makes sense as these communities are the ones where all of the ecotourism related businesses are located. Interestingly, the periodical *Agua Pura* is a popular source of news in these communities along the main road, excluding Monteverde.

Respondents' opinions showed some interesting results as well. Los Llanos and Monteverde had significantly lower opinions on the impact of development in the Monte Verde Zone. This is particularly interesting because Los Llanos is one of the fastest growing communities. Respondents in San Luis reported higher rates of satisfaction with community and Monte Verde Zone governance than other communities. Of course, this community is not located in on the main road. By contrast, Santa Elena and Cerro Plano, which are both located on the main road and are the two most populous communities, reported low rates of satisfaction with community governance. Also in contrast to respondents in San Luis, respondents in Monteverde, Rio Negro, and La Cruz reported

lower rates of satisfaction with governance of the Monte Verde Zone. In opinions on tourism the roles were reversed; San Luis respondents reported lower rates of satisfaction with tourism, while Monteverde, Rio Negro, and La Cruz reported higher rates of satisfaction.

Transportation data also showed some significant differences across communities. Respondents in Monteverde and San Luis used the bus to travel outside of the Zone significantly less than respondents in other communities. Respondents in Cerro Plano had higher rates of trips outside of the Zone than respondents from other communities with no data collected as to why. Respondents in communities along the main road (Santa Elena, Los Llanos, Cerro Plano), excluding Monteverde, reported higher rates of walking to get around the Zone when not going to work, and also reported higher rates of taxi use.

These results overall are probably best explained in relation to the location of the community and the amount of non-native residents. Where there are more non-native residents' especially along the main road opinion on tourism and development are better and satisfaction with community governance is worse.

Household Level Comparisons

In this section, the household information collected in the household instrument of the Development Survey will be analyzed to determine if there are any significant differences between communities.

Comparisons of Household Composition

The average household size in the Monte Verde Zone is 4.02. There is no significant difference in the average household size across the nine communities. In the

previous chapter, I noted that a very small percentage of households (5.7%) in the Monte Verde Zone reported having at least some members that do not reside in the Zone all year long, but rather only part of the year. This small percentage was consistent across all communities except for Monteverde, where the percentage was 16.2%. Again though, due to the low rate of completion and the probable avoidance of participation by residents with longer tenure, this percentage would probably be lower on a more representative sample of the Monteverde community. Also, 15 of the 22 households (68%) that reported having some members who do not permanently reside in the Monte Verde Zone cited work as the reason for the seasonal or temporary absence of some household members with this percentage consistent across communities.

Comparisons of Household Employment

As previously mentioned, the data for salary was collected using intervals instead of exact quantities for ethical reasons. To reiterate, the 8 equal intervals were chosen by MVI. At the time this data was collected the exchange rate was about 360 colones to 1 dollar. The intervals were of 30,000 colones which was the equivalent of \$33.33. The 9th interval was 240,000 colones or more, which was the equivalent of \$666.67 dollars a year. Out of 1169 reported salaries for the 532 households the 9th interval was only chosen 43 times or 3.7%.

For the Monte Verde Zone, 48.7% of households have 1 adult who is employed while 36.4% have 2 adults who are employed, with the average amount of employed adults being 1.56. The rate of adults who are employed per household for the nine communities is not significantly different in a chi-square. The means for the nine communities are also not significantly different in a one-way ANOVA.

Also, for the Zone the mean annual household income is 164,221.1 colones, which would mean that the mean annual household income for the Monte Verde Zone was \$456.17. Table 34 shows these results. In comparing the nine communities, the average household income was significantly different between communities in a one-way ANOVA with a $p < 0.001$. The highest community average household income (Monteverde) was more than double the lowest (San Luis). In a Scheffe post-hoc test, Monteverde is significantly different from every community except for Cerro Plano and Canitas.

Table 34: Mean Annual Household Income by Community

Community	Average Household Income
Santa Elena	157359.40 or \$437.11
Cerro Plano	191249.10 or \$531.25
Monteverde	295713.20 or \$821.43
San Luis	113808.40 or \$316.13
La Cruz	138386.40 or \$384.41
Canitas	172499.10 or \$479.16
La Lindora	134499.10 or \$373.61
Los Llanos	162352.20 or \$450.98
Rio Negro	131249.40 or \$364.58
Total (n=482)	164221.10 or \$456.17

Similar results are obtained if one looks at yearly income per working adult. Table 35 shows the results. For the Zone, the average working adult earns 108,350.6 colones or \$301 per year. There is a significant difference in the average amount earned per adult between communities in a one-way ANOVA ($p < 0.001$). In a Scheffe post-hoc test, Monteverde was significantly different from San Luis.

Table 35: Mean Annual Income per Working Adult by Community

Community	Income per Working Adult
Santa Elena	106986.60 or \$297.18
Cerro Plano	123776.60 or \$343.82
Monteverde	170356.50 or \$473.21
San Luis	67287.48 or \$186.91
La Cruz	100483.40 or \$279.12
Canitas	97782.79 or \$271.62
La Lindora	106160.20 or \$294.89
Los Llanos	112449.50 or \$312.36
Rio Negro	119999.50 or \$333.33
Total (n=482)	108350.60 or \$300.97

Respondents in the Monte Verde Zone were asked about the benefits that tourism has brought to their household. The majority of households in the Zone (71.0%) reported having benefited by procuring employment that is linked to tourism. When respondents were asked about the kind of employment 39.4% reported that someone in their household obtained full-time employment resulting from tourism, 7.7% reported that someone in their household obtained part-time employment resulting from tourism, and 26.4% reported that someone in their household obtained seasonal employment resulting from tourism. Table 36 shows these results by community.

Table 36: Household Benefits form Tourism by Community

Community	Employment (n=493)		Full-time Employment (n=492)		Part-time Employment (n=493)		Seasonal Employment (n=493)	
	n	%	n	%	n	%	n	%
Santa Elena	119	72.1%	63	38.4%	7	4.2%	51	30.9%
Cerro Plano	62	69.7%	34	38.4%	8	9.0%	21	23.6%
Monteverde	24	66.7%	15	38.2%	10	27.8%	5	13.9%
San Luis	36	57.1%	22	41.7%	5	7.9%	12	19.0%
La Cruz	13	54.2%	4	34.9%	3	12.5%	6	25.0%
Canitas	22	71.0%	14	16.7%	1	3.2%	7	22.6%
La Lindora	23	79.3%	9	45.2%	0	0.0%	14	48.3%
Los Llanos	49	94.2%	33	31.0%	3	5.8%	13	25.0%
Rio Negro	2	50.0%	0	63.5%	1	25.0%	1	25.0%
Chi-square p-value	0.001		0.004		<0.001		0.077	

When the rates of households benefiting from tourism through employment were compared across communities using a chi-square, the differences were significant ($p=0.001$). Los Llanos had the highest rate of employment resulting from tourism. La Lindora, Santa Elena, and Canitas also reported high rates of employment in tourism. On the other hand, San Luis and La Cruz reported the lowest rates. There were also significant differences in full-time employment ($p=0.004$) and part-time employment ($p<0.001$) but not seasonal employment across communities. Los Llanos had the highest rate of full-time employment while La Cruz had the lowest, with most of the other communities reporting in the mid to high 30% range. Monteverde, on the other hand, had the highest rate of part-time employment (about one fourth), with almost all of the other communities below 10%.

Table 37: Households Engaging in Farming Activities by Community

Community	Engaged in Farming (n=532)		Owns Land Used (n=103)		Is Land Sufficient (n=93)	
Santa Elena	10	5.4%	7	70.0%	5	62.5%
Cerro Plano	1	1.1%	0	0.0%	3	100.0%
Monteverde	4	10.8%	2	50.0%	3	100.0%
San Luis	38	60.3%	21	55.3%	27	75.0%
La Cruz	13	36.1%	11	84.6%	12	100.0%
Canitas	9	27.3%	6	66.7%	3	50.0%
La Lindora	19	63.3%	12	66.7%	9	56.3%
Los Llanos	8	15.1%	6	75.0%	5	71.4%
Rio Negro	2	40.0%	1	50.0%	2	100.0%
Chi-square p-value	0.001		0.004		0.147	

In the Monte Verde Zone, 19.5% of households engage in farming activities. Table 37 shows the results by community. Also, the majority of farming households reported having enough land for their farming activities (74.2%), with no significant differences between communities in a chi-square. On the other hand, there was a

significant difference on a chi-square in the rates of farming households between communities ($p < 0.001$). The majority of households reportedly engaged in farming activities were located in two communities, San Luis and La Lindora. In La Cruz and Canitas about a third of households engaged in farming activities. The most populous communities, Santa Elena, Cerro Plano, and Monteverde had the lowest rates of households engaging in farming activities.

The majority of farming households (64.1%) also reported owning the land that they were utilizing for their farming activities. However, there was a significant difference between communities in a chi-square ($p = 0.001$). Table 37 shows that of the communities that had many farming households, San Luis had the lowest rates of ownership of land, with many households borrowing the land they were utilizing. Also, 23.7% of households sampled in San Luis were engaged in an undescribed “other” arrangement.

Comparisons of Home Ownership

The majority of people in the Monte Verde Zone own their house or place of residence (73.3%). However, there is a significant difference when rates of homeownership are compared across communities in a chi-square ($p = 0.003$). Table 38 shows that although most of the communities have high rates of ownership, Monteverde reported a rate that was much lower than the others. The next lowest rate was in Santa Elena. This low rate in Monteverde, however, may be a result of the low participation rate in the survey. As previously mentioned, the research coordinator and I both suspected that it was residents who have lived in Monteverde for longer periods of time that were the most likely to refuse to participate in the survey.

Table 38: Home Ownership by Community

Community	Home Ownership (n=532)		Landlord is Costa Rican National Living in Monte Verde Zone (n=142)		Landlord is Foreign National Living Out of the Monte Verde Zone (n=142)	
Santa Elena	124	67.4%	49	81.7%	0	0.0%
Cerro Plano	64	70.3%	17	63.0%	3	11.1%
Monteverde	20	54.1%	3	17.6%	4	23.5%
San Luis	56	88.9%	6	85.7%	0	0.0%
La Cruz	29	80.6%	5	71.4%	0	0.0%
Canitas	25	75.8%	7	87.5%	0	0.0%
La Lindora	26	86.7%	4	100.0%	0	0.0%
Los Llanos	42	79.2%	8	72.7%	2	18.2%
Rio Negro	4	80.0%	0	0.0%	0	0.0%
Chi-square p value	0.003		<0.001		<0.001	

For those households that were not owned by the residents, the majority (74.6%) were rented with no significant difference between communities. The majority of respondents who rented stated that the owners of the rental properties they were living in were Costa Rican Nationals (82.4%). Most of these Costa Rican Nationals also lived in the Zone (69.7%). As can be seen on Table 38, the only community that showed a difference in the rates of nationality of owners was Monteverde, with 58.8% of respondent's rental properties being owned by foreign nationals with 23.5% of these foreign nationals residing outside of the country.

Comparisons of Household Vehicles

In the previous chapter, the results showed that the majority of households (54.9%) in the Monte Verde Zone reported having a means of transportation including motorized vehicles, bicycles, horses, and other. However, there was a significant difference between the nine communities in a chi-square ($p=0.004$) with the majority of households in some of the most populous communities not having any means of

transportation (Santa Elena 51.6%, Cerro Plano 52.7%, and La Lindora 60.0%). In fact, the average number of vehicles owned per household for the entire Monte Verde Zone was only 0.77. Table 39 shows these results. The difference in average number of vehicles per household between the nine communities was also statistically significant in a one-way ANOVA ($p < 0.001$), with Monteverde (on the high end at 1.51 vehicles per household) being significantly different than La Lindora (on the low end at 0.50 vehicles per household) in a Scheffe post-hoc test.

Table 39: Means of Transportation per Household by Community

Community	Average Number of Vehicles per Household
Santa Elena	0.65
Cerro Plano	0.60
Monteverde	1.57
San Luis	0.70
La Cruz	1.03
Canitas	1.03
La Lindora	0.50
Los Llanos	0.81
Rio Negro	1.00
Total (n=482)	0.77

When it comes to motorized vehicles, the majority of respondents throughout the Zone (69.5%) reported not having an auto or SUV. Table 40 shows these results by community. The difference between communities in ownership of auto or SUV was significant in a chi-square ($p = 0.002$). San Luis was much lower than the other communities. Further, On a one-way ANOVA that compared the average number of cars or SUV per household between the nine communities the difference was statistically significant ($p = 0.002$) with Rio Negro on the high end being significantly different from San Luis and La Lindora on the low end in a Scheffe post-hoc test. It is important to note that there were only 5 households collected from Rio Negro and so the results may not be

representative.

Table 40: Ownership of Select Vehicles per Household by Community

Community	Cars, SUV, or Jeep (n=532)		Motorcycle (n=532)		ATV (n=532)	
Santa Elena	57	31.0%	37	20.1%	5	2.7%
Cerro Plano	31	34.1%	8	8.8%	3	3.3%
Monteverde	17	45.9%	10	27.0%	5	13.5%
San Luis	8	12.7%	18	28.6%	3	4.8%
La Cruz	15	41.7%	14	38.9%	6	16.7%
Canitas	9	27.3%	10	30.3%	3	9.1%
La Lindora	6	20.0%	7	23.3%	0	0.0%
Los Llanos	15	28.3%	17	32.1%	1	1.9%
Rio Negro	4	80.0%	1	20.0%	0	0.0%
Chi-square p value	0.002		0.006		0.003	

Similarly, most households also did not own motorcycles (77.1%) or ATV (77.1%). The differences in motorcycle ownership and ATV ownership were statistically significant between the nine communities with p values on a chi-square of 0.006 and 0.003 respectively.

Comparisons of Household Computers

Only 15.8% of households in the Monte Verde Zone have computers. The difference in rates of computer ownership across the nine communities, however, is significant in a chi squared ($p < 0.001$). The one outlier is Monteverde with computer ownership in 59.5%. The next highest percentage is Cerro Plano with 23.1%.

Additionally, for the households that have computers 52.4% have internet access (8.3% of all households).

Summary of Household Level Comparisons

There were many significant differences between these communities' households. Households in Monteverde had significantly more income than households in all other

communities with the exception of Cerro Plano and Canitas. Households in Monteverde averaged double the annual income of households in San Luis. Further, Monteverde and San Luis were significantly different in the amount of money earned per working adult in a household, \$473 to \$187 respectively. Also, there was a significant difference in computer ownership across the nine communities with Monteverde being an outlier (59.5%).

Communities along the main road, such as Los Llanos, Santa Elena, Cerro Plano, and Monteverde were often significantly different from other communities on many variables relating to employment in tourism as these communities contain more households employed in this sector. Further, these same populous communities along the main road with high employment in tourism had the lowest rates of households that engaged in agricultural activities (all less than 10%). In fact, La Lindora (63.3%) and San Luis (60.3%) were the only two communities where the majority of households engaged in agricultural activities.

Monteverde was significantly different from the other communities in rates of home ownership. Barely over half of households in Monteverde reported owning their house. Further, Monteverde was also significantly different from the other communities in nationality of owners of rental property where a majority (58.8%) were foreign nationals.

There were also some significant differences for the nine communities in rates of ownership of vehicles or other means of transportation. The majority of households in Santa Elena, Cerro Plano, and La Lindora did not own any means of transportation. Monteverde, on the other hand, reported having 1.51 vehicles or other means of

transportation per household. However, this average was significantly different from only the lowest community, La Lindora, which reported an average of 0.50.

Summary of Community Comparisons Results

Both the comparison of respondents and households show consistent differences between communities that are located along the main road and ones that are not. But also, on many variables, but particularly on economically related variables, Monteverde is significantly different from all or most of the other communities.

For example, there was a significant difference between communities on the main road in percentage of individuals interviewed who were not originally from the Zone. These communities, Santa Elena (64.1%), Cerro Plano (53.8%), Monteverde (81.1%), and Los Llanos (54.7%), tallied a majority of non-native respondents, while communities not on the main road showed mixed results. This makes sense as these communities are the ones where all of the ecotourism related businesses are located. Interestingly, the periodical *Agua Pura* is a popular source of news in these communities along the main road, excluding Monteverde.

Respondents' opinions also showed some of these same trends. Respondents in San Luis, a community that is not located on the main road reported higher rates of satisfaction with community and Monte Verde Zone governance than other communities. This community also had a majority of respondents native to the Monte Verde Zone and significantly higher percentage of farming households than communities along the main road. By contrast, Santa Elena and Cerro Plano, which are both located on the main road and are the two most populous communities, reported low rates of satisfaction with community governance. Also in contrast to San Luis respondents, Monteverde, Rio

Negro, and La Cruz reported lower rates of satisfaction with governance of the Monte Verde Zone. In opinions on tourism, the roles were reversed; San Luis respondents reported lower rates of satisfaction with tourism, while Monteverde, Rio Negro, and La Cruz reported higher rates of satisfaction. Monteverde and Los Llanos had significantly lower opinions on the impact of development in the Monte Verde Zone. This is particularly interesting because Los Llanos is one of the fastest growing communities. But clearly, with their high opinions on tourism, low opinions on development, and low opinions of Zone governance, respondents in Monteverde set themselves apart from the other populous communities along the main road.

Transportation data also showed some significant results that fit the described pattern. Respondents in communities along the main road (Santa Elena, Los Llanos, Cerro Plano), excluding Monteverde, reported higher rates of walking to get around the Zone when not going to work and also reported higher rates of taxi use. These populous road communities, Santa Elena and Cerro Plano, also had a majority of households that did not own any means of transportation. By contrast, Monteverde reported having 1.51 vehicles or other means of transportation per household.

Households in Monteverde also had significantly more income than households in all other communities with the exception of Cerro Plano and Canitas. Households in Monteverde averaged double the annual income of households in San Luis. Further, Monteverde and San Luis were significantly different in the amount of money per job earned by working adults in a household \$473 to \$187 respectively. Also, there was a significant difference in computer ownership across the nine communities with Monteverde being on the high end (59.5%).

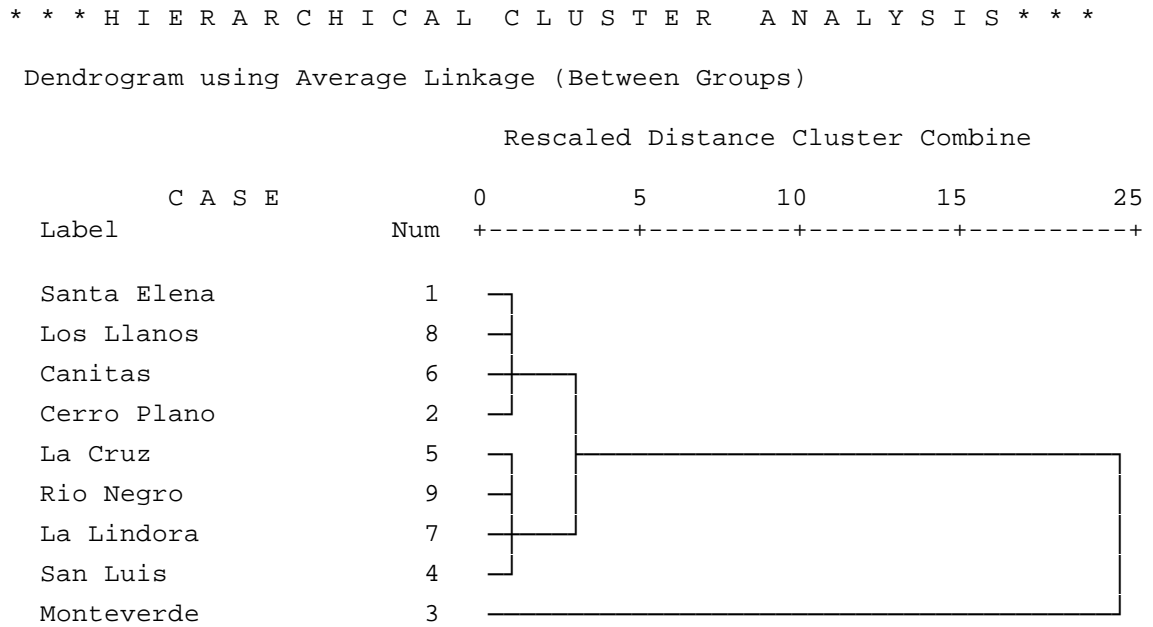
When it comes to employment in the tourism sector, the communities along the main road had more households reporting employment in tourism. Households in and around Santa Elena reported significantly higher rates of employment in tourism businesses (as high as 94.2% in Los Llanos). San Luis and La Cruz reported the lowest rates. Los Llanos also reported the highest rates of full-time employment in tourism (63.5%), with the Santa Elena and the communities surrounding it close behind. Further, these same populous communities along the main road with high employment in tourism had the lowest rates of households that engaged in agricultural activities (all less than 10%). By contrast, La Lindora (63.3%) and San Luis (60.3%) were the only two communities where the majority of households engaged in agricultural activities.

Additionally, Monteverde was significantly different from the other communities in rates of home ownership. Barely over half of households in Monteverde reported owning their house. Further, Monteverde was also significantly different from the other communities in nationality of owners of rental property where a majority (58.8%) were foreign nationals.

Conclusions

A good way of summarizing the data is through a multivariate hierarchical cluster analysis in order to determine which communities are more closely related to each other on a given set of variables. Using the percentage of non-native residents, the mean year of arrival, opinions on community governance, opinions on Zone governance, opinions on tourism, average number of vehicles, percentage of households employed in tourism, and mean annual household income the cluster analysis shown in Figure 1 was obtained.

Figure 1: Cluster Analysis of Monte Verde Zone Communities



The Dendrogram shows two clusters and one very distant outlier. The first cluster contains Santa Elena, Los Llanos, Canitas, and Cerro Plano. Interestingly, all of these communities are along the main road to the MCFP (except for Canitas) and are the fastest growing communities. Canitas, however, is adjacent to Santa Elena and on the main road to Juntas, the nearest small town in the Guanacaste Province. The second cluster contains La Cruz, Rio Negro, La Lindora and San Luis. These communities are smaller and growing at a slower rate. They have less participation in the ecotourism economy relative to the first cluster. They also have higher percentages of native residents. In this cluster analysis, Monteverde is a very distant outlier. Throughout the Development Survey results, Monteverde has scored significantly different measures than the other communities. It is the community nearest to the MCFP, but also has a high rate of foreigners and higher socio-economic indicators. This quantitative results echo the experience of being in Monteverde. Accounts in the literature, such as Honey (1999),

which accurately depicts the uniqueness of this community's history, illustrate how different the Monteverde community is from even those that are in close proximity to it.

The results of the household survey portion of the Development Survey, therefore, partially begin to address the issues raised by the research question and the objectives for the survey. The results presented here begin to create a basic demographic profile of the Zone. The results also summarized information relevant to the income structure of households in the Zone. The opinions of a sample of respondents on Tourism and Development were also presented. Data on issues of governance and the relationship between communities was also analyzed. Data on utilization and opinions of resources was also obtained. It is important to note, however, that the results presented here are limited by their synchrony. In order to present a more comprehensive analysis it would be necessary to repeat this survey in the future.

Chapter 5

Development Survey Results Business Instrument

Introduction

This chapter presents the results of the Development Survey obtained from the business instrument and collected in the summer of 2002 by native surveyors in the Monte Verde Zone, Costa Rica. The results are reported in a manner consistent with the Development Survey's objectives as outlined by the development research coordinator of the GRC, Dr. Trevor Purcell. To reiterate the objectives relevant to this section are:

- to determine the occupational and income structure of the Monte Verde Zone and how they relate to the development in general and ecotourism in particular;
- to determine, in preliminary, largely qualitative terms, the magnitude of the ecotourism sector and its impact on the development process.

First, information concerning the completion of the survey and data entry process is presented. This general completion information section uses the information contained in the final report of the execution of the Development Survey prepared by the research coordinator on the ground, C. Sophia Klemper, MPH (Appendix A). The results of the business instrument are then presented. Finally, a concluding section will summarize and synthesize the results to begin to answer the research questions as it relates to this section (*“What is the role of the various segments of the Monteverde population (community, occupational, locals, immigrants, business, etc.) in the overall development of the local*

economy and social structure?”).

General Completion Information

According to the final report on the completion of the Development Survey submitted by the MVI research coordinator on February 12, 2003, the 12 native surveyors completed 532 household surveys and 93 business surveys during late August thru September with some additional data collection continuing into the middle of October. On December 16, 2002, a debriefing meeting was held in Monteverde by the research coordinator to which all of the native surveyors were invited for the purpose of discussing the experience of administering the surveys as well as disclosing any perceived weaknesses or flaws with the two survey instruments. Eight of the eleven remaining surveyors attended the meeting, but the transcription of that meeting (which was apparently recorded) was never sent to the USF GRC by the research coordinator. When I spoke to the research coordinator regarding the outcome of that meeting, she revealed that the only complaint reported by the surveyors concerned the length of the household instrument, which often took more than an hour to administer. There were no complaints reported regarding the business instrument.

Business Survey

The research coordinator reported that the Business surveys took longer than expected and was not completed until mid-October. The final completion report details that there were difficulties in setting up appointments with high level managers or business owners and that repeated visits “often bore no fruit” as owners were out of town or too busy to have time for the interview. Further, most of the interviews were

conducted by one surveyor who was assigned this task exclusively. As Table 41 shows, the participation rate was very high, at 83%.

Table 41: Business Survey Completion Results

Business Survey Completion Results		
Community	Completed Surveys	Refused or Not available
Cañitas	3	0
Cerro Plano	34	4
La Cruz	0	0
La Lindora	1	0
Los Llanos	0	1
Monteverde	15	3
Río Negro	3	0
San Luis	3	0
Santa Elena	34	8
TOTAL	93 (83%)	16 (17%)

In the final report, the research coordinator also pointed out that the ecotourism business sector changes very rapidly in the Monte Verde Zone. Apparently, in the time between the end of the data collection, mid October, and the preparation of this final report, submitted in February, the research coordinator had observed two business changing ownership and at least one new restaurant, two new hotels, one new bookstore, and one new internet café.

Date Entry into SPSS

In October 2002, MVI moved one of its staff to help the research coordinators enter the survey data into SPSS. This process was completed by February, at which time the research coordinator spent February to April checking the data for accuracy and recoding some of the numerous “other” selections. The data was sent to USF GRC in April, and, upon receiving it, I spent the summer of 2003 putting labels and cleaning up many of the fields. Unfortunately, much data was lost as the fields did not match the survey questions.

The Business Survey

The business instrument was intended to collect information from all of the businesses that would consent to the survey. As such, the goal was not to survey a sample of the tourism related business but rather all of the business and ask them to report on their perceived link to tourism.

Business Location

As Table 42 shows, the majority (89%) of the 91 business surveyed were located in the three communities that are closest to the Monteverde Cloud Forest Preserve on the main road that connects back to the Pan American Highway – Santa Elena (35.5%), Cerro Plano (35.5%) and Monteverde (16.1%).

Table 42: Location of Businesses

Community	Number of Businesses	
Santa Elena	33	35.5%
Cerro Plano	33	35.5%
Monteverde	15	16.1%
San Luis	3	3.2%
La Cruz	3	3.2%
Canitas	1	1.1%
La Lindora	3	3.2%
Los Llanos	0	0.0%
Rio Negro	3	3.2%
Other	2	2.2%
Total (n=93)	93	100%

Business Inauguration

Some of the oldest businesses that were surveyed dated back to the 1950's. However, more than 50% of the businesses surveyed in the Monte Verde Zone were inaugurated after 1993 and 28.6% since 2000. There was also no difference in the age of business when communities were compared on a one-way ANOVA.

Business Classification

Participating businesses were asked to classify themselves as one of several categories. Table 43 shows the results. The majority of businesses described themselves as either touristic (43.5%) or ecotouristic (27.1%), with the third most common self-description being service sector (10.6%). Assuming that self-described tourism businesses can be classified as service sector, 81.2% of businesses are self-described as service sector, with 70.6% self-described as touristic or ecotouristic. There was also no significant difference on a chi-square across the different communities in businesses by type of self-classification.

Table 43: Most Common Business Self-Classifications

Community	Touristic		Ecotouristic		Service Sector	
Santa Elena	16	51.6%	4	12.9%	6	19.4%
Cerro Plano	17	53.1%	7	21.9%	2	6.3%
Monteverde	3	27.3%	5	45.5%	1	9.1%
San Luis	0	0.0%	1	33.3%	0	0.0%
La Cruz	0	0.0%	0	0.0%	0	0.0%
Canitas	1	33.3%	2	66.7%	0	0.0%
La Lindora	0	0.0%	1	100.0%	0	0.0%
Los Llanos	0	0.0%	0	0.0%	0	0.0%
Rio Negro	0	0.0%	2	66.7%	0	0.0%
Other	0	0.0%	1	100.0%	0	0.0%
Total (n=85)	37	43.5%	23	27.1%	9	10.6%

Participating businesses were also asked to report whether they were a “for profit” or “not for profit” enterprise. The majority of businesses classified themselves as for profit enterprises (91.4%).

Source of Initial Capital

When businesses were asked about the source for the initial capital utilized to open the business, the most common response was that the capital came from the owner (48.4%). The second most common response was from several sources (21.5%) with

bank loan being the third (15.1%). Table 44 shows the results. There was no significant difference across communities.

Table 44: Sources of Initial Capital

Source of Capital	
Own Capital	48.4%
Bank Loan	15.1%
Mixed	21.5%
Other	15.0%
Total (n=93)	100.0%

Business Ownership

The most common form of ownership was family ownership (45.9%), with partnership being the second most common (35.3%), and individual ownership the third (17.6%). The results are shown on Table 45. There is no significant difference between communities.

Table 45: Types of Business Ownership

Type of Ownership	
Individual	17.6%
Family	45.9%
Partnership	35.3%
Other	1.2%
Total (n=85)	100.0%

About a quarter of business (26.4%) reported that their owners also owned other businesses in the Monte Verde Zone. Further, 17.6% of all businesses reported that their owners owned other businesses in Costa Rica. Additionally, the majority of business owners (60.7%) were Costa Rican nationals living in the Monte Verde Zone, with foreign nationals residing in the Monte Verde Zone the second most common response (17.9%). Further, the average amount of time that the current owners have owned the business was 6.9 years. This number may not be significant, however, given that the distribution of length of business tenure is so wide. The majority of businesses (82.2%) also reported

that they owned the land or lot where their business is located. These results are summarized in Table 46.

Table 46: Common Characteristics of Business Owners in Zone

Characteristics of Owners	
Costa Ricans Residing in Monte Verde Zone	60.7%
Foreign Nationals Residing in the Monte Verde Zone	17.9%
Naturalized Costa Rican Living in Monte Verde Zone	6.0%
Other	14.4%
Total (n=84)	100.0%

Businesses Employment

In the Monte Verde Zone, 77.4% of businesses reported hiring employees. This percentage was consistent across all self-imposed businesses classifications (business sectors). As Table 47 shows, many businesses only hired 1 (20.4%) or 2 (10.8%) employees. However, businesses surveyed employed a total of 416 people with the average being 4.47 per businesses.

Importantly, there are four outliers employing 92, 31, 29, and 20 people who affect the average (172 people or about a third of all people employed by 4 businesses). These 4 largest employers are *Productores Monteverde* (92), which is the dairy factory, the MCFP (31), and two hotels (29 & 20) that self-described as ecotouristic. When looking specifically at the 60 ecotouristic and touristic businesses, 31.7% reported not employing any one. The remainder employs 199 people with an average of 3.32 per business. The results are shown in Table 47.

Table 47: Characteristics of Employment in Monte Verde Zone

Characteristics of Business Employment	
Total Number of People Employed by businesses (n=93)	416
Businesses Not Employing Anyone	31.2%
Businesses Employing 1 employee	20.4%
Businesses Employing 2 employees	10.8%
Average Number of Employees per Business	4.47
Characteristics of Ecotouristic or Touristic Business Employment	
People Employed by Ecotouristic or Touristic Businesses (n=60)	199
Ecotouristic or Touristic Businesses not Employing Anyone	31.7%
Ecotouristic or Touristic Businesses Employing 1 person	23.3%
Ecotouristic or Touristic Businesses Employing 2 people	10.0%
Avg. Number of Employees per Ecotouristic or Touristic Business	3.32

Seasonal Profits

Because we had discovered through our initial informal interviewing that there is a marked low season in the Monte Verde Zone, businesses were asked if they were able to cover losses incurred in the low season with profits made in the high. The majority of businesses (74.4%) reported that they could cover low season loss with high season profits. When asked whether the business had obtained any loans during the last five years, 46.7% of businesses reported that they had.

Summary of Results

The majority of businesses in the Monte Verde Zone are located in the three most populous communities along the main road (Santa Elena, Cerro Plano, and Monteverde). The majority of these businesses had been initiated after 1993. Of the businesses surveyed, 43.5% self described as touristic and 27.1% described as ecotouristic. If the

percentage of businesses that self-described as service sector is added, and assuming that touristic businesses are service sector employment, then 81.2% of businesses self-described as service sector.

The most common source of capital for starting a business in the Zone was from the current owner (48.4%), with bank loan and various sources at 15.1% and 21.5%). In addition, the most common source of ownership was family (45.9%) with partnership (35.3%) second. Further, 26.4% of business owners owned other businesses in the Zone. In terms of nationality and residence of owners, 60.7% of business owners were Costa Rican nationals who resided in the Monte Verde Zone and 17.9% of owners were foreign nationals who resided in the Monte Verde Zone.

In the Monte Verde Zone, 77.4% of businesses reported hiring employees. This percentage was consistent across all self-imposed businesses classifications (business sectors). The majority of businesses only hired 1 (20.4%) or 2 (10.8%) employees. However, businesses employed a total of 416 people with the average being 4.47 per businesses. Importantly, there are four outliers employing 92, 31, 29, and 20 people who affect the average (172 people or about a third of all people employed by 4 businesses). These 4 largest employers are *Productores Monteverde* (92), which is the dairy factory, the MCFP (31), and two hotels (29 & 20) that self-described as ecotouristic. When looking specifically at the 60 ecotouristic and touristic businesses, 31.7% reported not employing any one. The remainder employs 199 people with an average of 3.32 per business.

Finally, because it appeared, through our initial informal interviewing, that there is a marked low season in the Monte Verde Zone, businesses were asked if they were

able to cover losses incurred in the low season with profits made in the high. The majority of businesses (74.4%) reported that they could cover low season loss with high season profits. When asked whether the business had obtained any loans during the last five years, 46.7% of businesses reported that they had.

Given these results, it is fair to conclude that the majority of businesses in the Monte Verde Zone self-described as service sector (81.2%) with most of these self-describing as touristic or ecotouristic businesses. Self-described touristic or ecotouristic businesses provided almost half (199 or 47.8%) of the jobs recorded by our survey. But, the biggest single employer, however, was *Productores Monteverde* (the dairy factory) with 92 employees. That means that although there is a significant service sector, the agricultural sector, of which the dairy factory is a part, is still a significant employer of people in the Zone. Also, it is important to note that almost a third of touristic or ecotouristic businesses do not employ any one (31.3%). Very important, as well, is the fact that many of these businesses are owned by people residing in the Monte Verde Zone (78.6%) whether Costa Rican (60.7%) or foreign nationals (17.9%).

The high rate of local ownership and plethora of small businesses are consistent with what the literature, including The World Summit on Ecotourism Final Report (2002), predicted would be good ecotourism. Acuna Ortega *et al* (2000) characterized Monteverde as a mature ecotourism cluster and the Development Survey results seems to generally back that description.

Chapter 6

Conclusion

Final Analysis

The results for the Development Survey in the Monte Verde Zone mirrored some of the patterns described in the literature but also provided information that fills important gaps and raises important questions. In articles that described ideal ecotourism economies like (Hawkins 1994; Hartshorn 1995; Ceballos-Lascurain 1996; World Ecotourism Summit – Final Report 2002) one of the most important factors was local ownership. In the Monte Verde Zone, there is certainly high rates of local ownership with 78.6% of businesses owned by people residing the Zone whether Costa Rican (60.7%) or foreign nationals (17.9%). This was important for scholars like Burnie (1994) who insists that ecotourism must include non-exploitation of local peoples.

Another finding that was predicted in the literature is the large service sector which provides employment for a majority of households in the Monte Verde Zone. As Honey (1999) observed, the new ecotourism based economy is displacing the agricultural economy. Our survey found 71% of households are now procuring employment from tourism while only 19% of households are engaged in agrarian activities on any scale. This is important considering that 41.1% of respondents who have not lived in the Zone since birth reported coming in the 1990s, and 19.2% reported coming in the first three years of the 2000s. This shift mirrors what is happening in Costa Rica, in general, over

the last decade, as reported by Bulmar-Thomas (1994). Self-described touristic or ecotouristic businesses provided almost half (199 or 47.8%) of the jobs recorded by the business instrument of our survey. But, the biggest single employer, however, was *Productores Monteverde* (the dairy factory) with 92 employees. That means that although there is a significant service sector, the agricultural sector and manufacture sector, of which the dairy factory is a part, is still a significant employer of people in the Zone. It is important to note that almost a third of touristic or ecotouristic businesses do not employ any one (31.3%).

The Development Survey results also help fill some gaps in the literature and answer the call by Maria Bozzoli (2000) to study the specific effects that development resulting from tourism is having on people and communities. Specifically, the Development Survey presents some important household level findings that suggest a complex picture. For example, it is certainly no surprise that service sector jobs would not provide high salaries. Our survey found that the average household of four has a self-reported average yearly household income is 164221.1 colones or \$456.17 and is living on less than \$2 a day. In the absence of directly comparable measures from the World Bank or United Nations reports, World Bank statistics in 2002 show that approximately 26% of people in Costa Rica live on less than \$2 a day. That means that if the self-reported income levels are accurate, household in the Monte Verde Zone are probably some of the poorest in Costa Rica.

However, it is certainly the case that households in the communities that are along the main road with residents that are employed in the tourism sector have significantly more income than household in communities that are not along the main road and which

have the highest rates of engaging in agrarian activities. Also, the majority of respondents surveyed (56%) were not originally from the Monte Verde Zone, particularly in communities along the main road like Santa Elena (64.1%), Cerro Plano (53.8%), Monteverde (81.1%), and Los Llanos (54.7%). These individuals have come to the Monte Verde Zone from within Costa Rica (89%), mostly from surrounding areas which are agrarian communities. It is, therefore, reasonable to assume that people come to the Monte Verde Zone seeking these jobs because they provide more income and because the Zone has more opportunities for employment.

Clearly, this growth is what is leading to the kinds of problems described by Chamberlain (2000). Therefore, articles and books on ecotourism like (Taylor 1994; Honey 1999; and Menkhaus and Lober 1996) correctly describe ecotourism as a mixed blessing. The challenge, as both Costa Rican applied scholars like Badilla (1994), Figueroa B. (1996), and Fürst and Hein (2001), as well as international scholars like Hunter (1997) describe it, is management that balances conservation and economic growth (increased profits). But all of these articles, even international documents like the Final Report of the World Ecotourism Summit (2002), only offer abstractions. There is no practical strategy offered for managing growth. It is not clear from reading these documents, for example, how an area like the Monte Verde Zone can slow down its growth so as not to suffer the consequences that Chamberlain (2000) is warning about. It seems that in the age of globalization, attempts to manage growth are abandoned to market forces. These market forces, however, can continue to significantly change an area and result in scenarios like those predicted by Place (1998) or Weaver and Elliott

(1996) where ecotourism is no different from the previous tourism model that devastated local communities.

In the development literature, successful development is portrayed as small scale and community directed (Uphoff *et al* 1998). Like the Taquilenos of lake Titicaca (Sheldon and Hakim 1988), successful communities managed growth through community organizations. But they were also helped by geographical isolation which provided an obstacle for rapid growth. Similarly, geographical obstacles also exist in the Monte Verde Zone, as it is located up a winding dirt road in the central mountain range of the country. But the paving of the road is likely to significantly reduce this obstacle and speed up growth. It would be interesting to see if a paved road reduces the length of stays and the use of local businesses by visitors as it becomes possible to go through the Monte Verde Zone in a shorter period of time; this is essentially what happened to the Taquilenos, which undermined their management (Sheldon and Hakim 1988).

Directions for Future Research

It is important that future research in the Monte Verde Zone explore some of the findings in the Development Survey with more depth. Although there appears to be a difference between communities located along the main road and those located elsewhere (illustrated nicely by Figure 1), particularly in involvement in the tourism economy (resulting in higher reported rates of household income), it is important to question whether these respondents are truly “better off.” Additionally, as many of the residents of the Monte Verde Zone are non-native, do locals welcome these newer arrivals? Is there a difference between the different groups of new arrivals (Costa Ricans vs. foreign immigrants)? How has employment in the service sector affected family life? Is there a

difference in the health status of more rural and more urban communities? Yet unpublished research in the Monte Verde Zone by nutritional anthropologists David Himmelgreen seems to indicate that what predicts food insecurity in rural vs. urban households is different. It appears that households in Santa Elena, for example, are more likely to be food insecure if they are not members of a cooperative. Combining the kinds of information collected by the Development Survey with other kinds of data, such as health outcomes, would provide a more complete understanding of how ecotourism based development affects local communities. Finally, the Development Survey is limited by the fact that it is a one time intervention and, therefore, is not designed to account for change. A longitudinal study and a repeat survey at some future point would produce more complete results.

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Appendices

Appendix A: Development Survey Final Report

USF/MVI Development, Ecotourism and Social Organization Research
Subagreement # 1226-032-LO-A

Final Report
February 12, 2003

Summary of Activities, August 8, 2002 - February 12, 2003

To date, the Institute has completed the first five work areas detailed in the subagreement, including data entry for the household and business surveys and a final debrief meeting with field surveyors. The total number of household surveys completed is 532 and the total number of business surveys completed is 93. Following are details regarding the work completed.

On December 16, 2002, a debrief meeting was held with all surveyors to discuss the strengths and weaknesses of the surveys and the experience in general of administering the surveys. At the meeting, eight of the eleven surveyors were present. The discussion is being transcribed and will be sent under separate cover.

Supervise the administration of surveys in the designated communities of Monteverde: *Household Survey*

The household surveys were carried out during the months of August and September by 11 field surveyors. Surveyors worked an average of twenty five hours per week, mainly on weekdays, and were required to attend weekly meetings at which concerns and problems with the application of the survey were discussed, completed forms turned in, new materials distributed, and time sheets reviewed. Weekly meetings were key to maintaining the validity of the survey by ensuring questions were understood in a similar way by the surveyors and were asked in a standard fashion. Due to the importance of the meetings, attendance was an essential requirement for the position. One surveyor (Dulce Wilson) had difficulty fitting the meetings into her schedule and thus had to be asked to leave her position. Dulce frequently interviewed houses that were outside of the area of households assigned to her and in one case, used a survey form that was not consistent with the language in which the interview was conducted. The data from this particular survey is not included in the final results, since the questions were not asked in the same manner as the other interviews.

The original research proposal estimated a one month period for data collection. The house hold survey data collection took twice that long to complete. This was due primarily to the following three factors: 1) the need for repeated visits to homes especially in the larger communities of Cerro Plano, Monteverde, and Santa Elena, 2) the weekly meetings needed to coordinate the distribution of work among 12 surveyors and to troubleshoot problems that arose in the application of the survey (this meant that

Appendix A (Continued)

surveyors lost one morning of work each week); and 3) the length and detail of the survey, especially the household survey, permitted surveyors to conduct a maximum of three surveys daily.

The other issue of concern that arose during the administration of the household survey was identification of cases of domestic violence. One of the surveyors on this project was a participant in the Institute's lay health promoter program focused on family violence prevention in the mid-1990s, and is therefore known by some in the community for her work supporting women in situations of domestic violence. In two instances women she was interviewing for the survey told her of problems with domestic violence. In both cases, she consulted with the project supervisor about the issue and was asked to return to the house to secure permission from the woman to report the case to the clinic for follow-up by the social worker. In both cases, consent was granted and the Institute provided written reports to the clinic's domestic violence prevention initiative. The women were then invited to participate in support groups and their cases were given to the social worker at the clinic for follow-up.

In Appendix I there is a table showing the sample size and survey completion rates for each of the nine communities included in the household survey. The original samples outlined in the research proposal were taken from the Monteverde Clinic annual health assessment reports (EBAIS) from 2000. These figures were significantly low for Cerro Plano, La Cruz, La Lindora, Los Llanos and San Luis due in part to the rapid population growth which is estimated at 5-7% per year in some areas of Monteverde. The EBAIS figures were higher in Monteverde and in Santa Elena most likely due to the erratic development patterns that make housing counts difficult. In the case of Cañitas, the overestimation by the EBAIS may be due to them using a different town limit than what is commonly regarded as the town limit between Santa Elena and Cañitas. For the purposes of this survey, we counted all houses located after the *Trapiche* (sugar cane mill) as belonging to Cañitas.

The overall participation rate in the household survey was 75%. The highest response rates were in Los Llanos, La Cruz, La Lindora and Santa Elena, with Cerro Plano, Cañitas, San Luis all having response rates of over 65%. The lowest response rates were in Monteverde and Río Negro. The low response rate in Monteverde has been attributed to the unique demographics of the community characterized by large number of part-year residents and a predominance of rental housing. Informal observation and anecdotal evidence also suggests that some part-year residents rent out their homes during periods of the year they are not in Monteverde, others simply leave their homes vacant. Much of the rental housing is rented out to people who are living in Monteverde on a temporary basis ranging from a few months to several years. Anecdotal evidence also suggests that some Monteverde residents, especially those with roots in the 1950s and 1960s, have reached a saturation point with research and therefore refuse to participate in studies. All of these factors, combined with the fact that August and September are the rainiest months of the year and a time when most part-year residents, and a certain portion of

Appendix A (Continued)

year-long residents are away from Monteverde (in the U.S. or Europe). Río Negro is a very small community whose guardedness is commonly attributed to events in recent history which led to the dispossession of their lands and to the failure of community-based tourist enterprises. The interviewer assigned to this community remarked that the only reason she was able to complete surveys in five of the homes was because she was known to the community members.

Santa Elena's success was due in great measure to the persistence of the two researchers (a mother-son team) who covered the bulk of the community. They kept careful track of the homes that they needed to return to when no one was home or when people were too busy to talk, and returned sometimes up to 4 times to homes before finding someone to interview. The success in the other communities was primarily due to surveyors being known in those communities and also, in the cases of Cañitas, La Cruz, La Lindora and Los Llanos, all rural communities, women were readily found at home and tended to have more time to talk and less resistance to being interviewed.

Business Survey

Business surveys likewise took longer than expected and were not finished until mid-October. This was due to the difficulties encountered in several cases in setting up appointments with high level managers or business owners. In some cases, repeated visits bore no fruit, as owners were repeatedly out of town or too busy to have time for the interview. Overall the participation rate was very high at 83%.

Just to give a sense of how rapidly changes are occurring in the tourism sector, since the survey was completed, several businesses have opened in Monteverde and some have changed ownership. From informal observation there is at least one new restaurant, two new hotels, one new bookstore, and one new Internet Café in the Monteverde Zone. Two businesses in Monteverde proper have changed ownership. The following table details the distribution of survey completion in the nine communities of Monteverde.

Business Survey Completion Results		
Community	Completed Surveys	Refused or Not available
Cañitas	3	0
Cerro Plano	34	4
La Cruz	0	0
La Lindora	1	0
Los Llanos	0	1
Monteverde	15	3
Río Negro	3	0
San Luis	3	0
Santa Elena	34	8
TOTAL	93 (83%)	16 (17%)

Appendix A (Continued)

Compile and enter survey data into software:

In October, Marlene Leitón was hired to enter data from the surveys into SPSS software. Once separate databases for the household and business surveys were set up at the end of October, Marlene began to enter data. The data entry was completed at the beginning of February, 2003 and is presently being checked for accuracy. Some changes have been suggested to USF-GRC representatives regarding codes for some questions in the business survey which had an unmanageable number of "other" responses. These changes were discussed and agreed upon, and have been made. The same will likely occur with the household data, once it is carefully reviewed.

Data analysis and presentation:

The Monteverde Institute will have all the data ready to begin analysis by February 28, 2003. Data will be analyzed together with GRC-USF representatives and compiled for oral presentations to local communities during the first week in April of 2003. Further plans for written dissemination of results are under discussion and will be mutually agreed upon by MVI and USF-GRC.

Appendix A (Continued)

Appendix I Household Survey Sample and Completion Results

Household Development Survey Sample and Completion Results					
Community	Total Households (EBAIS 2000)	Total Households (MVI 2001/2002)	Sample Size based on MVI household estimate	Completed Surveys (Participation Rate)	Not Home/ Refused to Participate or not a house
Cañitas	77	46 **	41	33 (81%)	8
Cerro Plano	81	211 *	136	91 (67%)	45
La Cruz	19	42 **	38	36 (95%)	2
La Lindora	24	36 **	33	30 (91%)	3
Los Llanos	41	59 **	53	53 (100%)	0
Monteverde	171	146 *	106	37 (35%)	69
Río Negro	14	14 **	14	5 (36%)	9
San Luis	73	99 **	89	63 (71%)	26
Santa Elena	342	311 *	204	184 (90%)	20
TOTALS	842	959	714	532 (75%)	182 (25%)
<p>* MVI figures are based on house counts conducted by students in the Sustainable Futures scenario planning project. The data is more accurate than the EBAIS figures due to using exhaustive field methods to count and classify every structure. To date the housing counts have been carried out in Cerro Plano, Santa Elena and Monteverde. The inaccuracy of this data is in the classification of structures into one of three categories: residential, business or outdoor. Since students collecting the data are from the US and are not as familiar with the types of construction, some misclassification exists in the data. This inaccuracy was most pronounced in Monteverde, where a considerable number of structures classified as residential, were in fact workshops, storage sheds or abandoned housing.</p> <p>** The housing estimates for the remaining communities (Cañitas, La Cruz, La Lindora, Los Llanos, Río Negro, and San Luis) is based on the surveyor's field work. Since household figures were not well established in these communities, surveyors were instructed to interview 9 out of every 10 houses in order to achieve an adequate sample size, except in Río Negro, where they were instructed to visit every house due to the small size of the community.</p>					

Appendix B: Household Instrument

Household Survey

Research Topic: Development and Ecotourism in Monteverde Zone
Purpose: The survey is intended to collect data on the social and economic development of the Monteverde Zone. It is part of the larger study to assess the link between ecotourism, development, in general, and biodiversity.

Researcher: Dr. Trevor Purcell

Interviewer: _____ Questionnaire No.: _____

A. Demographic Data

1. Identification of household: _____

2. Number of individuals in household: _____

3. a) Gender of respondent: ? Male [1] ? Female [2]

b) What is the position of the respondent in the household?: _____

4. Age of respondent (interviewer may fill in age based on observation):

? 18-29 [1] ? 30-39 [2] ? 40-49 [3] ? 50-59 [4]
? 60-69 [5] ? 70-79 [6] ? 80-up [7] ? Other [0] _____

5. Identify community in which household is located:

? Santa Elena [1] ? Cerro Plano [2] ? Monteverde [3]
? San Luis [4] ? La Cruz [5] ? Canitas [6]
? La Lindora [7] ? Los Llanos [8] ? Rio Negro [9]
? Other [0] _____

6. a) Do the members of this household reside in this household year round?:

? Yes [1] ? No [2]

b) If no, where do members of this household reside other than here?:

? Santa Elena [1] ? Cerro Plano [2] ? Monteverde [3]
? San Luis [4] ? La Cruz [5] ? Canitas [6]
? La Lindora [7] ? Los Llanos [8] ? Rio Negro [9]
? Costa Rica (other than Monteverde Zone) [10] Where?: _____

? Foreign Country [11] Where?: _____

? Other [0] _____

Appendix B (Continued)

c) Which members of this household?: _____

d) During which parts of the year?: _____

e) Why do members of this household reside in two or more places?:
? Work [1] ? Leisure [2] ? Other [0] _____

7. Have you lived in Monteverde since birth?: ? Yes [1] ? No [2]

If Yes move go to #8, if No go to #9

8. If since birth,

a) Have you always lived in this community: ? Yes [1] ? No [2]

b) If no, which was the last community you lived in?:

? Santa Elena [1] ? Cerro Plano [2] ? Monteverde [3]

? San Luis [4] ? La Cruz [5] ? Canitas [6]

? La Lindora [7] ? Los Llanos [8] ? Rio Negro [9]

? Costa Rica (other than Monteverde Zone) [10] Where?: _____

? Foreign Country [11] Where?: _____

? Other [0] _____

c) And, why did you decide to move to this particular community?:

? Work [1] ? Visited and stayed [2] ? Family [3]

? Friends [4] ? Other [0] _____

d) And, What year?: _____

Proceed to #10

9. If not since birth,

a) What year did you or your household move to the Monteverde Zone?: _____

b) Where did you move from?:

? Costa Rica (other than Monteverde Zone) [1] Where?: _____

? Foreign Country [2] Where?: _____

? Other [0] _____

Appendix B (Continued)

c) Why did you or your household decide to move to the Monteverde Zone?:

? Employment [1] ? Family [2] ? Friends [3]
 ? Visit and stayed [4] ? Other [0] _____

d) Did you move as a household?: ? Yes [1] ? No [2]

 If not, how many and who in family moved?: _____

e) Why did you or your household decide to move to this particular community (instead of another in community in the Monteverde Zone?: _____

10. How long do you or your household plan on staying in the Monteverde Zone?:

? Permanently [1]
 ? Temporarily, I reside here all year round now for my work, but only plan on staying while I work here [2]
 ? Temporarily, I reside here all year round now for my leisure, but plan on moving away eventually [3]
 ? I live here only seasonally [4], Which season?: _____
 And Why?: _____

? Other [0] _____

11. Total number of vehicles owned by household:

Type	Number	Capacity (including driver)
Cars/Jeeps		
Vans		
Trucks		
Bicycles		
Horse, other livestock for transport		
Motorcycle		
Cuadrociclo		
Other (specify):		

12. Will household agree to do travel diary?: ? Yes [1] ? No [2]

13. a) Does the household have a computer?: ? Yes [1] ? No [2]

Appendix B (Continued)

- b) Does the household have internet access?: ? Yes [1] ? No [2]
14. a) Do you own the house you live in?: ? Yes [1] ? No [2]
- b) If the land is rented, leased, or shared, who owns it?: _____
- c) And is he/she/they a . . .
- ? Costa Rican national residing in the Monteverde Zone [1]
 - ? Costa Rican national residing outside of the Monteverde Zone [2]
 - ? Foreign national residing in the Monteverde Zone [3]
 - ? Foreign national residing in Costa Rica [4]
 - ? Foreign national residing outside of Costa Rica [5]
 - ? Other [0] _____

B. Employment

15. How do the members of your household make their living:

a) Person	b) Years of schooling	c) Age	d) Relation to respondent	e) Job	f) Location of Job	g) Salary for specific job	h) Job seasonal variation
				1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.
				1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.
				1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.
				1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.

Instructions on how to fill out the table:

- a) Write person's first name.
- b) Write the number of years of school completed.

Appendix B (Continued)

c) Use age category code. Age categories include:

18-29 [1]	30-39 [2]	40-49 [3]	50-59 [4]
60-69 [5]	70-79 [6]	80-up [7]	Other [0]

Write age.

d) Use relationship category code. Relationship to respondent categories include:

Father [1]	Mother [2]	Brother [3]	Sister [4]
Husband [5]	Wife [6]	Grandfather [7]	
Grandmother [8]	Son [9]	Daughter [10]	
G-Grandfather [11]	G-Grandmother [12]		
Uncle [13]	Aunt [14]	Cousin [15]	Self [16]
Grandson [17]	Granddaughter [18]	Nephew [19]	Niece [20]
Father-in-law [21]	Mother-in-law [22]	Brother-in-Law [23]	
Sister-in-law [24]	Other [0]	Write relationship.	

For e), f), g) and h) if person has multiple jobs, then number 1 in each box would correspond to job 1, number 2 in each box would correspond to job 2, and so on.

e) Use job category code. Job categories include:

Clerk [1]	Waiter [2]	Bartender [3]	Maid [4]
Maintenance [5]	Tour guides [6]	Managerial [7]	
Food service [8]	Taxi operator [9]	Professional [10]	
Public Servant [11]	Business owner [12]	Farmer, dairy [13]	
Farmer, beef cattle [14]	Farmer, coffee [15]	Farmer, vegetables [16]	

Other [0] Write which.

f) Use location category code. Location categories include:

Santa Elena [1]	Cerro Plano [2]	Monteverde [3]
San Luis [4]	La Cruz [5]	Canitas [6]
La Lindora [7]	Los Llanos [8]	Rio Negro [9]

Costa Rica (other than Monteverde Zone) [10] Write where.
Foreign Country [11] Write where.
Other [0] Write where.

g) Use salary category code. Salary categories include:

<30,000 [1]	30,000-60,000 [2]	60,000-100,000 [3]
100,000-250,000 [4]	>250,000 [5]	

h) Use seasonality category codes. Seasonality categories include:

Year round [1]	Wet season only [2]	Dry season only [3]
Temporary, 1-3 months [4]	Temporary, 4-6 months [5]	
Temporary, 7+ months [6]		

Other [0] Write length.

Appendix B (Continued)

Questions #16-19 pertain to farming families. If household is not involved in farming skip to question #20.

16. If household engages in farming, what type of farming does it do (check all that apply)?:
- ? Dairy [1] ? Beef cattle [2] ? Coffee [3]
? Vegetables [4] ? Other [5] _____
17. a) If family is farming family, do they (check all that apply):
- ? Own land [1] ? Rent [2] ? Free-share (use for free) [3]
? Own and rent [4] ? Own and free-share [5] ? Rent and free-share [6]
? Other [0] _____
- b) If the farming land is rented, leased, or shared, who owns it?: _____

- c) And is(are) he/she/them . . .
- ? Costa Rican national residing in the Monteverde Zone [1]
? Costa Rican national residing outside of the Monteverde Zone [2]
? Foreign national residing in the Monteverde Zone [3]
? Foreign national residing in Costa Rica [4]
? Foreign national residing outside of Costa Rica [5]
? Other [0] _____
18. How much land do you have (own, leased, shared, all that you can use)?:
_____hectares
19. Is the land you have adequate for your needs?: ? Yes [1] ? No [2]
- C. Community

Appendix B (Continued)

20. To what community organizations do you or members of your household belong?

a) Person	b) Age	c) Relationship to respondent	d) Organization	e) Type of participation	f) Length of involvement
			1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.
			1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.
			1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.
			1. 2. 3. 4.	1. 2. 3. 4.	1. 2. 3. 4.

Instructions on how to fill out table:

a) Write person's first name.

b) Use age category code. Age categories include:

18-29 [1]	30-39 [2]	40-49 [3]	50-59 [4]
60-69 [5]	70-79 [6]	80-up [7]	Other [0] Write age.

c) Use relationship category code. Relationship to respondent categories include:

Father [1]	Mother [2]	Brother [3]	Sister [4]
Husband [5]	Wife [6]	Grandfather [7]	Grandmother [8]
Son [9]	Daughter [10]	G-Grandfather [11]	G-Grandmother [12]
Uncle [13]	Aunt [14]	Cousin [15]	Self [16]
Grandson [17]	Granddaughter [18]	Nephew [19]	Niece [20]
Father-in-law [21]	Mother-in-law [22]	Brother-in-Law [23]	Sister-in-law [24]

Other [0] Write relationship.

For d), e), and h) if person belongs to multiple organizations, then number 1 in each box would correspond to organization 1, number 2 in each box would correspond to organization 2, and so on.

Appendix B (Continued)

d) Write in the *name* and *type* of organization in the box. Examples of *types* of organizations are listed below:

Cooperatives	Government board	Church group
Community groups	Health committees	Government assistance program

e) Use type of participation category code. Type of participation Categories include: Formal member [1] (involves membership in a formal organization where there is typically an application process where participation is usually mandatory; “socio”). Informal member [2] (involves membership in informal organizations like a women’s health group where participation is not mandatory but person usually attends and participates.)

Observer [3] (attends meetings of informal or formal organizations but does not participate in meeting or/and is not officially a member.)

Leader/Coordinator [4] (person in charge of planning coordinating group activities.)

Volunteer [5] (member of an organization that comes together to perform a specific task; person do not receive monetary compensation.)

d) Use length of involvement category code. Length of involvement categories codes include:

0-3 months [1]	4-6 months [2]	7-12 months [3]	1-2 years [4]
2-5 years [5]	5 years + [6]		

21. What participation do you have in the development of the Monteverde Zone?:
- ? Formal participation [1] (involves membership in a formal organization where there is typically an application process and mandatory participation; “socio”, person who has a formal positions within formal institutions).
 - ? Informal participation [2] (involves membership in informal organizations where participation is not mandatory but person usually attends and participates. Person and organization involve themselves in development issues even though they do not have a formal place within the institution).
 - ? Observer [3] (does not participate or attempt to participate in development issues even though they may occasionally attend informational meetings).
 - ? Leader [4] (person in charge of running or coordinating organizations that have formal input into development process).
 - ? Other [0] _____

Appendix B (Continued)

22. a) What participation do you have regarding public services in the Monteverde Zone?:
- ? Formal participation [1] (involves membership in a formal organization where there is typically an application process and where participation is usually mandatory; “socio”, person has formal positions within formal institutions).
 - ? Informal participation [2] (involves membership in informal organizations where participation is not mandatory but person usually attends and participates. Person and organization involve themselves in development issues even though they do not have a formal place within the institution).
 - ? Observer [3] (does not participate or attempt to participate in development issues even though they may occasionally attend informational meetings).
 - ? Leader [4] (person in charge of running or coordinating organizations that have formal input into development process).
 - ? Other [0] _____
- b) If you participate as anything other than an observer, which public service do you involve yourself with?:
- ? Water [1] ? Transportation [2] ? Electricity [3]
 - ? Healthcare [4] ? Sewage [5] ? Roads [6]
 - ? Education [7] ? Garbage collection [8] ? Recycling [9]
 - ? Other [0] _____
23. If you do not agree with decisions made by leaders about the Monteverde Zone, to what formal authority or community leader do you appeal?: _____

24. How do you receive information about decisions in the Monteverde Zone?:
- ? Word of Mouth [1] ? Meetings [2] ? Internet [3]
 - ? Bulletin *Fuerza Femenina* [4] ? Magazine *Agua Pura* [5] ? Letters [6]
 - ? National Newspaper [7] ? Television [8] ? Radio [9]
 - ? Other [0] _____
25. How would you like to receive information about decisions in the Monteverde Zone?:
- ? Word of Mouth [1] ? Meetings [2] ? Internet [3]
 - ? Bulletin *Fuerza Femenina* [4] ? Magazine *Agua Pura* [5] ? Letters [6]
 - ? National Newspaper [7] ? Television [8] ? Radio [9]
 - ? Other [0] _____

Appendix B (Continued)

26. What type of transportation do you use to . . . (check all that apply):
- a) go to and from work?:
- ? Walk [1] ? Motorcycle [2] ? Taxi [3] ? Car [4]
? Horse [5] ? Bus [6] ? Bicycle [7] ? Car pool [8]
? Hitch ride with lechero [9] ? Hitch ride (not lechero) [10]
? Other [0] _____
- b) go to and from areas outside of the Monteverde Zone?:
- ? Walk [1] ? Motorcycle [2] ? Taxi [3] ? Car [4]?
Horse [5] ? Bus [6] ? Bicycle [7] ? Car pool [8]
? Hitch ride with lechero [9] ? Hitch ride (not lechero) [10]
? Other [0] _____
- c) How often?:
- ? Once a year or less [1]
? More than once a year but less than once a month [2]
? More than once a month [3]
? Once a week or more [4]
? Other [0] _____
- d) travel inside the Monteverde Zone (not work)?:
- ? Walk [1] ? Motorcycle [2] ? Taxi [3] ? Car [4]
? Horse [5] ? Bus [6] ? Bicycle [7]
? Hitch ride on milk trucks (lechero) [8]
? Other [0] _____
- e) How often?:
- ? Once a year or less [1]
? More than once a year but less than once a month [2]
? More than once a month [3]
? Once a week [4]
? Several times a week but not daily [5]
? Daily [6]
? Several times a day [7]
? Other [0] _____

For questions #27-32 Its ok not to answer if the subject is not comfortable answering

Appendix B (Continued)

27. How satisfied are you with the way your community is governed?:
 ? Not satisfied [1] ? Somewhat satisfied [2] ? Satisfied [3]
 ? Very satisfied [4] ? No response [00]

28. In your opinion, which individuals, groups, or groups of individuals make decisions about how the Monteverde Zone is governed?:

Name/Identifier	Position/Role

29. In your opinion, which individuals, groups, or groups of individuals make decisions about the affairs of your own community?:

Name/Identifier	Position/Role

30. In your opinion, which individuals, groups, or groups of individuals would you like to see making decisions about the Monteverde Zone?:

Name/Identifier	Position/Role

31. What do you consider to be the important organizations in the zone?: _____

Appendix B (Continued)

32. In your opinion, which individuals, groups, or groups of individuals would you like to see making decisions about your own community and what qualities in these groups or individuals do you value?:

Name/Identifier	Position/Role	Qualities
		1. 2. 3.
		1. 2. 3.
		1. 2. 3.

33. a) What is your general opinion about how tourism affects the Monteverde Zone?:
 ? Very positive [1] ? Moderately positive [2] ? Neutral [3]
 ? Moderately negative [4] ? Very negative [5]
 ? No response [00]

b) Why do you feel the way you do?: _____

34. What if any benefits has tourism brought to your family?:
 ? Full-time employment [1] ? Temporary or seasonal employment [2]
 ? Part-time employment [3] ? Housing [4]
 ? Entertainment [5] ? Education/Schools [6]
 ? Shopping opportunities [7] ? Business opportunities [8]
 ? Other [0] _____

35. What have been the negative effects of tourism in this area?: _____

Appendix B (Continued)

36. How do you rate the availability of the following services?:

	Very adequate (more than satisfies my needs) [1]	Adequate (satisfies my needs) [2]	Not adequate (not enough for my needs) [3]	Not available [4]
a) Water				
b) Bus				
c) Taxi				
d) Roads				
e) Sewage				
f) Electricity				
g) Garbage collection				
h) Health care				
i) Education				
j) Agricultural Extension				
k) Credit				
l) Banking Services				
m) Telephone				
n) Recreation				
o) Therapy or Counseling				
p) Recycling				

D. Health, Water, and Sanitation

37. What is the source for your water?:

? Spring [1] ? Stream [2] ? I don't know[3]

? Other [0] _____

Appendix B (Continued)

38. What type of water supply system do you have?:
? Aqueduct (public) [1] ? Private system (group) [2]
? Private system (individual) [3] ? Other [0] _____
39. Is the water chlorinated?:
? Yes [1] ? No [2] ? Don't know [3]
40. Are there times when you have no water?:
? Never [1] ? Sometimes [2]
? Frequently [3] Explain. _____
41. a) Are there times when you receive water of poor quality?:
? Never [1] ? Sometimes [2]
? Frequently [3] Explain. _____
- b) If you receive water of poor quality, do you treat it in your house?:
? Never [1] ? Sometimes [2]
? Frequently [3] Explain. _____
42. Is your drinking water from the tap?:
? Yes [1] ? No [2] ? I don't know [3]
43. How would you rate your water supply?:
? Poor [1] ? Satisfactory [2] ? Excellent [3]
44. In your opinion, the monthly amount you pay for water is:
? Cheap [1] ? Reasonable [2] ? Expensive [3]
? No cost (private) [4]
45. How many toilets are there in the house/building?:
? 1 [1] ? 2 [2] ? 3 [3] ? more [4]
46. What type of toilet(s) do you have?:
? Flushing [1] ? Latrine [2] ? Composting [3]
? Other [0] _____
47. Is your toilet(s) connected to a septic tank?:
? Yes [1] ? No [2] if no why?: _____
? Don't know [3]

Appendix B (Continued)

54. a) Do you store water in your household?:
? Yes [1] ? No [2]

b) Briefly explain why you store water and where you store it: _____

Appendix C: Business Instrument

Survey #1 Business and Ecotourism

Research Topic: Development and Ecotourism in Monteverde Zone
Purpose: The survey is intended to collect data on the social and economic development of the Monteverde Zone. It is part of the larger study to assess the link between ecotourism, development, in general, and biodiversity.
Researcher: Dr. Trevor Purcell

Interviewer: _____ Questionnaire No.: _____

Interviewee's Name: _____ Interviewee's Position: _____

A. Type of Business

1. Name of business: _____

If business is a combination of businesses, list additional names here:

2. Type of business:
- | | | |
|---|------------------------------|-----------------------|
| ? Adventure Tour [1] | ? Animal zoo [2] | ? Art gallery [3] |
| ? Bar [4] | ? Café [5] | |
| ? Camping Ground [6] | | |
| ? Department store [7] | ? Discotheque [8] | ? Ecological farm [9] |
| ? Gas station [10] | ? Gift shop [11] | ? Grocery [12] |
| ? Hotel [13] | ? Hotel with restaurant [14] | ? Internet café [15] |
| ? Laundromat [16] | ? Motorcycle rentals [17] | |
| ? Park or preserve [18] | | |
| ? Restaurant [19] | ? Supermarket [20] | ? Transportation [21] |
| ? Hotel with other business [22] Specify: _____ | | |
| ? Multiple-business (two or more businesses in one other than hotel) [23] | | |
| Specify: _____ | | |
| ? Other [0] _____ | | |

Appendix C (Continued)

3. Location:
? Santa Elena [1] ? Cerro Plano [2] ? Monteverde [3]
? San Luis [4] ? La Cruz [5] ? Canitas [6]
? La Lindora [7] ? Los Llanos [8] ? Rio Negro [9]
? Other [0] _____

4. In what year did this business begin in Monteverde?: _____

5. a) How would you categorize your business in terms of the Monteverde Economy?:
? Touristic [1] ? Ecotouristic [2] ? Educational [3]
? Entrepreneurial [4] ? Agricultural [5] ? Service sector [6]
? Other [0]

b) If ecotouristic, what makes it ecotouristic?: _____

B. Type of Ownership

6. Is business: ? “For profit” [1] ? “Not for profit” [2]

If answered for profit proceed to #6, if not for profit proceed to #9

7. If for profit, how is it owned?:
? Individual [1] ? Family [2] ? Partnership [3]
? Other [0] _____

8. Which of the following best describes the owner?:
? Costa Rican national residing in Monteverde Zone [1]
? Costa Rican national residing outside of Monteverde Zone [2]
? Naturalized Costa Rican living in the Monteverde Zone [3]
? Foreign national residing in Monteverde Zone [4]
? Foreign national residing in Costa Rica [5]
? Foreign national residing outside of Costa Rica [6]
? Other [0] _____

Proceed to #10

Appendix C (Continued)

9. If “not for profit,” how is this business run (e.g. by board of directors, director, etc.)?: _____

10. How many years under the current ownership?: _____
11. a) Do the owners of this business own other businesses in Monteverde?:
 ? Yes [1] ? No [2]
- b) Name(s) of other business(es): _____

- c) Do the owners of this business own other businesses in Costa Rica?:
 ? Yes [1] ? No [2]
- d) Name(s) of other business(es): _____

C. Employee Profile

12. Who do you employ?:

a) Type of position	b) Number of persons who occupy this position	c) Sex of employees (# males/# females)	d) Salary provided

Instructions on how to fill out table:

- a) Use positions category code. Position categories include:
 Clerk [1] Waiter [2] Bartender [3] Maid [4]
 Maintenance [5] Tour guides [6] Managerial [7] Food service [8]
 Other (specify) [0]

Appendix C (Continued)

- b) Write the number of persons who occupy that particular position.
- c) Write the number of male and female employees who occupy this position.
- d) Use salary category code. Salary categories include (monthly in colones):

<input type="checkbox"/> <30,000 [1]	<input type="checkbox"/> 30,000-60,000 [2]	<input type="checkbox"/> 60,000-100,000 [3]
<input type="checkbox"/> 100,000-250,000 [4]	<input type="checkbox"/> >250,000 [5]	<input type="checkbox"/> No response [00]

Interviewer's comments: _____

D. Facility Capacity (Hotels, Restaurants, etc.)

13. Inventory advertisements in hotel lobbies or restaurants that deal with tourism.
 a) Destinations advertised: _____

b) Who makes the flyers?: _____

14. Total number of rooms:

Type	Number
one-bed	
two-bed	
other _____	

15. Do you keep records of customers?:
- a) Annual: ? Yes [1] ? No [2]
 - b) Seasonal: ? Yes [1] ? No [2]
 - c) Would you be willing to allow a researcher to look at your records to study patterns in seasonal occupancy?:
 ? Yes [1] ? No [2]

Appendix C (Continued)

b) If so, for what?: _____

c) From where?: _____

23. How much land or space does the business occupy?:
_____ hectares

24. Do you own or rent the space or land?:
? Own [1] ? Rent [2]

25. Why did you decide to open a business in Monteverde?: _____

26. How does your business attempt to operate in a sustainable fashion?: _____

27. How does your business support forest protection projects?: _____

28. In what ways does your business contribute to the community?: _____

29. What do you do with your recyclable waste now that it is no longer collected?:
? Take to recycling plant in Cerro Plano [1]
? Bury it [2]
? Throw it out [3]
? Other [0] _____