

**IMPACTS ON DEVELOPING COUNTRIES OF CHANGING
PRODUCTION AND CONSUMPTION PATTERNS IN
DEVELOPED COUNTRIES:
THE CASE OF ECOTOURISM IN COSTA RICA**

DRAFT

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1. Introduction

Costa Rica, a small Central American country with approximately 3.5 million people and a Gross National Product (GNP) of US\$2,400 per capita in 1995 (WRI, 1996), has gone through several successful periods of resource-based exportation. In successive waves—first coffee, then beef, followed by bananas and currently tourism—each resource has seen periods of intense expansion in output. The boom in Costa Rica's tourism market began in 1987, and by 1995 the industry was generating US \$659.6 million per annum. This made tourism the top generator of foreign revenues and 7.5% of Costa Rican GDP, above the banana industry (US\$ 633.2 million), coffee (US\$ 417.1 million) and beef (US\$ 43.6 million) (ICT, 1995).

Tourism is the largest economic sector in the world, generating US\$381 billion in 1995, excluding the approximately US\$57 billion spent on international transport. Costa Rica has gone from accounting for 0.8% of world tourism income in 1986 to 1.9% in 1993; tourism income “per capita” is now approximately US\$140 per annum, the highest in Central America. From 1969 to 1982 tourist arrivals rose at an average of 9% per year, compared with the 14% growth rate during the 1986 to 1994 period (Aylward *et al.*). Hard currency from tourism grew from 3% of GDP in 1987 to 8.5% in 1994 (ICT, 1995), providing income to 11.7% of the economically active population, (which is above the world average of 10%).

Early visitorship by scientists and conservationists, along with the development of Costa Rica's National Park system, were the keys to the current importance of ecotourism to the country (Budowsky, T., 1990). The growth of ecotourism in Costa Rica has been greatly facilitated by the presence of institutions such as the Organization for Tropical Studies (OTS) and the Institute for Biodiversity (INBIO), which helped to create Costa Rica's image abroad. The research and publications of the scientists working at these institutions has helped create an image of Costa Rica that is appealing to ecotourists (Rovinsky, Y.).

Costa Rica accounts for roughly 5% of global biodiversity, which gives the country a competitive advantage in the natural resources needed for the development of ecotourism. Although the country has more deforested land than any other Latin American nation (Blake), it also has the highest percentage of protected land in the world (Fenell and Eagles). Additionally, Costa Rica has preserved these lands and natural habitats in such a way that they are more accessible to tourists than those of any other country in the region (Budowski, 1993).

This early investment in the creation of a national conservation system—today valued at US\$1.2 billion (Umaña, A., 1996)—has helped Costa Rica develop a strong image as a nature-oriented tourism destination. In the last ten years the total number of visitors to the National Park has grown fairly consistently. The percentage of foreign tourists in Costa Rica who also visit the parks has varied between 30-60% per year, and the annual growth in foreign visitorship to the National Parks has varied even more considerably (see the following table). Most private sector tourist enterprises cite the rise in park entrance fees for foreigners as the major cause for the decrease in visitorship in the mid-1990s. CANATUR estimated an income loss for the country of US\$65 million during this period.

Table 1
FOREIGNER VISITATION TO COSTA RICAN NATIONAL PARKS - 1997

Year	Total Visitation by Foreigners to Costa Rica	Growth (%)	National Park Tickets sold to Foreigners	Growth (%)
1988	329,000		125,000	
1989	376,000	14	167,000	33
1990	435,000	16	213,000	27
1991	504,000	16	273,000	28
1992	611,000	21	322,000	18
1993	684,000	12	404,000	25
1994	762,000	11	378,000	-6
1995	784,000	3	252,000	-33
1996	781,000	-0,7	269,000	7

Source: Area de Estadísticas, ICT; Dirección de Parques Nacionales, 1997.

Given the importance of tourism in the global economy, along with Costa Rica's strong niche position in ecotourism, the growth of interest in ecotourism, and Costa Rica's recent experiments with costing and pricing of its natural environment, we are interested in understanding the structure of the country's ecotourism segment. Little research has been done to establish whether ecotourism is a viable niche alternative to mass-market tourism as a tool of economic development. We seek to do so here as a first attempt to understand the value chain of ecotourism in Costa Rica. This is exploratory work, rather than an attempt to test hypotheses or build a theory. It is a case study of the influence of Northern Hemisphere actors on Costa Rica's economy.

2. Tourism: The World's Largest Industry

This case study examines Costa Rica's ecotourism segment primarily because tourism has become so important a source of economic development in Southern Hemisphere countries. Tourism has become a symbol of opportunity in virtually every corner of the globe. International travelers and tourists directly and indirectly create more than 10% of the world's GDP and capital investment. This accounts for 11% of all consumer expenditure and 7% of total world government spending. A new job is created every 2.4 seconds by the global tourism sector. It is estimated that, during 1996, 255 million people--a number close to the total population of the United States--worked for travel and tourism around the world. "Tourism is an economic, environmental and social force of global proportions" (Saayman).

2.1 Structure of the Travel and Tourism Industry

2.11 Components of Demand

The demand for travel and tourism is the need to travel domestically or internationally for social, business, cultural, religious, recreational, and holiday purposes. People who travel away from home are visitors or excursionists. However, only over-night visitors are tourists (McIntyre). Tourism is divided into domestic and international tourism. Domestic tourism is 10 times larger than international tourism. This study will concentrate on international tourism, of which 75% is within the same global region.

The main actors in the tourism industry have historically been industrialized countries, capturing in 1996 55.82% of the total 594 million international tourist arrivals and 63.97% of the total US\$ 423 billion international tourist receipts (WTO, 1997). Continental Europe has typically been the most visited region in the world. During 1996, two thirds of world tourist arrivals and half of world tourism receipts were in Europe. France, The United States and Spain have been, since 1980, the world's top tourism destinations receiving annually around 25% of all world tourist arrivals. The United States, France and Italy have also been the world top tourism earners since 1980, receiving from 25% to 29% of all world tourist receipts annually. The world's top tourism spenders are also industrialized countries: Germany, The United States and Japan accounted for 37.36% of all 1995 tourism expenditures.

2.12 Components of Supply

The travel and tourism industry includes a wide range of economic and social interactions. Tourism supply is an interconnection of many different sectors of the economy. Generally, these sectors include direct travel services, private and public transportation, food consumption, accommodations, marketing, and natural, cultural, and manmade attractions. All international airlines, airports, roads, restaurants, hotels, lodges, travel books, cultural fairs, museums, and sport events are sectors of the tourism industry.

The tourism industry is fragmented into a large number of businesses and lacks market leaders (Stephen). Large hotel chains, international airlines and major tour wholesalers are the few strong players that exist, allowing them to have a strong impact on travel choices made by tourists. The rest of the industry is supplied by millions of service providers around the world.

This fragmentation has prevented the tourism industry from integrating and developing policy clout

or creating enough lobby pressure to be noticed (Lipman). It also explains why tourism, being the largest industry in the world, is not yet perceived as a primary economic activity. Tourism does not feature in industrialized countries' national charts of accounting; and public policies regarding investment, jobs, or infrastructure do not consider their impact on travel and tourism.

The industry's conditions favor small businesses over large businesses, explaining its high fragmentation. It is difficult to become a large market holder in tourism because of its low barrier to entry, its seasonality, its global scope, and its reliance on a high degree of personalized service (Stephen). It is relatively easy to enter the tourism market--becoming a guide, a taxi driver, or opening a souvenir shop--because no high investments are required.

It is also easier for small businesses to cope with the seasonality of tourism. Furthermore, small businesses have some advantages in providing customized personal service. On-site owners are often more attentive to customer needs than armies of employees. Large "chain" service providers, such as hotels or restaurants, have brand name advantages over small independent providers, but these are more a function of marketing economies of scale than reputation for superior service. Furthermore, while chains are going global at a rapid pace, they are still vastly outnumbered by small, independent service providers in most tourism destinations.

2.2 Travel and Tourism Industry Growth Pattern

International travel and tourism has had a remarkable record of consistent growth, expanding faster than the world's GDP in the last four decades (Vialle). During the last 40 years, travel and tourism has been growing 7.2% in volume and 12.3% in value per year (Vialle). Massive tourism started after World War II, with only 2 million international tourists during 1942. Eight years later, in 1950, the industry had multiplied 12 times to 25 million world tourists. Twenty years later, in 1970, the number more than quintupled to 175 million tourists.

Today this number has more than tripled to 594 million tourists around the world. "International tourists have increased by more than 1500% in the past thirty years" (Lickorish, 37). In the United States alone, over the past decade, world tourism arrivals have grown by 72% and international tourism receipts are up 217% (Dogget). Travel and tourism's constant growth shows strong resistance to economic fluctuations. Only twice has its growth rate decreased: during the Gulf War in 1991, and during 1993's economic recession in the developed world (WTO, 1997).

The international tourism industry has grown consistently, but not homogeneously. Industrialized countries are losing a small percentage of their substantial market share to developing countries. International tourist arrivals to developing countries have increased at an average of 6.2% annually during the last 16 years, faster than the 3.8% average rate of developed countries. Tourism receipts also increased faster from 1980-1996 in developing countries, with an annual mean of 9.9% versus the 8.5% annual mean of developed countries.

Moreover, within developing countries, practically all of the increase in tourist receipts in the last sixteen years corresponds to Asian/Pacific countries (except China), which rose from 7.4% in 1980 to 14% in 1995, capturing half of developing country receipts in 1996. The same pattern occurred in tourist arrivals: from having 6.1% in 1980, the region increased its market share to 10.3% in 1996, and captured one third of 1996 developing countries tourist arrivals.

Latin America and the Middle East are the regions losing most of their market share of developing

countries tourist arrivals and receipts to the Asian region. However, all developing countries have increased their growth rates of arrivals and receipts. Africa, for example, has the highest percentage growth of tourist arrivals and receipts from 1995 to 1996 in the world.

The forecasts for the tourism industry are as promising as its history. “[Tourism’s] GDP contribution is forecast to grow at a healthy 46% in real terms over the next decade” (Cummings and Mills). The WTO forecasts that tourism’s absolute contribution to the world economy will have more than doubled by 2005, having US\$7.1 trillion in gross output, employing 305 million people, generating 11.4% of global GDP, US\$1,613 billion in investment, and US\$1369 billion in tax revenue (www.wttc.org/wttcgate.nsf, 5/2/97). The high-flying region will be Asia, where growth between 7% and 10% is expected, that will eventually lead the region to capture half of international travel by 2005 (Lipman).

Tourism’s historic and expected future growth rates have brought much attention to the industry as a phenomenon. Tourism is now being investigated in scholarly communities worldwide. Futurist John Naisbitt predicts “the 21st century economy will be driven by 3 super service sectors: Telecommunications, Information Technology, and Travel and Tourism” (WTTC).

2.3 Economic Impacts of Travel and Tourism

The economic and social effects of traveler’s money on consumption, trade, investment, taxation, and employment are enormous. Tourism, being a labor-intensive industry, has above average potential to create employment. “Tourism is the world’s largest generator of jobs” (WTTC). It creates jobs directly in travel and stimulates jobs across the economy in other related sectors; this underlies tourism’s added value as a job creator. The wide range of transactions undertaken by or for travelers has an impact on construction, telecommunications, agriculture, retail, and others. Kodak and Fuji owe much of their job security to tourism; 50% of all photographs are travel related (Cummings and Mills).

Tourism is an important job-creating tool because it can be targeted to particular regions bringing jobs and infrastructure to locations that were never imagined. Many developing countries use tourism to create jobs and gain transfer of technology. Mexico planned and developed its top tourist destination, Cancun, in large part by offering land at negligible prices in exchange for the jobs and know-how associated with large international service providers constructing and operating their businesses there.

Tourism’s annual employment growth rate of 5.2 %, is 50% faster than the world annual employment growth rate of 2.45%. Over 100 million new tourism jobs across the global economy are forecasted over the next decade. Besides tourism’s importance in job creation, the industry’s multiplier effect intensifies tourism’s contribution to national and local income. Since tourist consumption money will be re-spent again, this will increase national tourist consumption by a factor equal to the tourism income multiplier. The benefits of the multiplier depend on the amount of tourist revenues that leak out of the economy through savings, taxes, and imports.

Economies with high leakage, that depend on imports, have high taxes and/or savings rates, have a low multiplier effect and therefore receive fewer benefits from tourism. This is the case for most developing countries, where large hotel chains import most of their raw materials and take most of their profits to their home country. In industrialized countries, the multiplier effect is between 1 and 2.5, while in most underdeveloped countries, it is much lower. The World Bank calculated that

“approximately 55% of gross tourism revenues to developing countries leak back to developed countries” (Ziffer).

The effect on a country’s balance of payments is another important economic impact of tourism. When a tourist spends money in another country, it is a debit on its country’s BOP, and a credit on the tourist destination BOP. Expenditures by nationals on foreign tourism are imports, and foreigner expenditures in the home country are exports. A country that increases the rate of international arrivals is exporting more tourist services. Tourist service export is the major source of strong foreign currency entrance to most developing countries, more important than traditional exporting products (WTO, 1997).

Finally, the travel and tourism industry affects societies by the economic externalities that it carries. Externalities are positive or negative impacts that affect non-participating parties (Ziffer). Positive impacts are the advantages of having tourism, and are not a problem like the negative impacts. Physical damages to public natural resources due to tourism is an example of an economic loss borne by the local community, that tourists may not be forced to pay. An increase in prices due to a new demand of wealthy tourists, is a pecuniary externality that locals must pay for, too. Communities must develop public or private methods that force their tourists to bear the full costs of their trip.

Tourism’s economic and social consequences are just recently beginning to be recognized. Governments now have a direct interest in the development of tourism within their country. It is evident that “21st century job-creating strategies should highlight the new service sectors like Telecommunications, Information Technology and Travel and Tourism” (Cummings and Mills).

2.4 Travel and Tourism Industry Segmentation

To segment is to divide the potential market of a product or service into a number of subgroups, as homogeneous as possible (Tabares). It is a useful tool for marketing mass-oriented products or services like tourism. The tourism market is already heavily segmented, and it is segmenting even more as people become more sophisticated in their holiday expectations. This study categorizes international tourists into five different segments according to the objective of their trip. The segments are the following:

Business Tourists- This segment accounts for 30% of international travel (McIntyre). The tourist travels to do business, attend a business-related convention, or enjoy a paid vacation.

Holiday Tourist- 70% of international tourists is in this segment. Holiday tourists are divided into traditional tourists --taking sun and beach vacations, doing urban sightseeing-- or special interest tourists --those who prefer to take advantage of their vacation doing something different of their interest. Within the special interest segment, five different sub-segments are evident:

Cultural Heritage Tourism - people who travel to experience, and learn from a new culture.

Sports Tourism – tourists who want to play a certain sport, like ski, or want to watch a sport, (e.g. the Olympic Games).

Professional Interest Tourism – professionals traveling to visit places that are related to their profession, like an architectural landmark to an architect, or Venezuela to a Spanish language teacher.

Health Tourism – people who travel with the purpose of feeling better at the end of the trip; like going to a spa to cleanse the body with healthy food, practicing yoga, and/or simply relaxing.

Nature Tourism – nature lovers who travel with the only intention of having contact with nature; like visiting the Grand Canyon, observing elephants on an African safari, or touring the National Park system of Costa Rica.

Duty Tourism- Tourists with the purpose of accomplishing a family or religious duty. This segment, along with the Academic and Medicinal segments, accounts for 10% of international tourists. (Note: Business traveling is also considered a duty, but its high participation in total international tourism makes it a different segment).

Academic Tourism- Tourists who are traveling with the purpose of learning or teaching something. It includes students, researchers, and teachers.

Medicinal Tourism- The purpose of this traveler is to be cured of a sickness or injury, or receive medical treatment.

The cultural heritage and the nature sub-segments of the holiday tourist segment, when combined, create the ecotourism sub-segment of the market. This combination follows from the Ecotourism Society's definition of ecotourism. With this in mind, it is possible to categorize the elements within this sub-segment as follows:

Hard ecotourism: Involves an intense or scientific interest in nature, sometimes strenuous physical effort and some non-hotel accommodations. Some of the activities included in this segment are bird watching, nature photography and botanical trips. The butterfly farm visitors are not included in this segment because there are not many tourists who come specifically to see butterflies (Jim Wolf, Mariposario de Monteverde). During the last few years this type of tourist has been demanding more amenities, now often expecting to have a comfortable hotel for accommodations. (Piza, 07/1997). This has raised the price of doing business, especially when combined with the need for specialized guides that charge more for the trips, and the orientation to destinations that are more inaccessible and create higher transportation costs.

General or soft ecotourism: This segment is growing faster than any other and includes the tourists who want to observe wildlife, a natural environment or a culture closely, but casually. Hiking is the most common activity, and may be combined with any of the activities in the hard ecotourism category, but is generally less intense, less deeply educational, and may not be the only type of tourism activity for which the trip was taken (i.e. a soft ecotourism activity may be followed by a week at a beach resort).

Adventure ecotourism: Involves moderate- to high-risk activities like surfing, scuba diving, snorkeling, wind surfing, whitewater rafting, sport fishing, kayaking and canoeing, bungee jumping, and bouldering. Usually this type of tourist is less interested in the complexity or structure of the ecosystem where the activity is taking place, but will take steps to learn about the fundamentals of these issues in order to protect the future availability of their favored outdoor activity. Whether this type of activity can rightly be considered ecotourism has been debated because some of the activities included in this segment don't fit the principle of respecting to the natural environment without changing it.

Educational ecotourism: Describes the trips organized by educational or other type of institutions that involve formal lectures of topics related with the environment. This segment includes scientists who come for research purposes and for extended stays in the country.

3. Important Driving Forces Behind Tourism's Northern Actors

Industrialized countries' tourists, businesses, governments, and NGOs are the main force behind world travel and tourism. They are the force that created, developed, and run the largest industry in the world. Their own driving forces determine the direction and magnitude of tourism shifts. What are the changes and conditions that influence northern actors in their decision-making, and, therefore, affect the tourism industry? Northern countries' economic health, industrial and technological progress, northerners' values and lifestyle patterns, demographic changes, product differentiation and segmentation, and globalization are the six main driving forces behind tourism's northern actors.

3.1 Northern Economic Health

The industrial revolution that northern countries started at the turn of the 20th century led them through constant economic expansion and to the large and diversified capitalist economies they have today. The United States has been growing at a constant 2.9% annually for the last century, making its GDP multiply 13 times in the last 35 years (U.S. Bureau of the Census). Japan is another success story, increasing its per capita income from US\$2,540 in 1972 to US\$28,190 in 1992 (World Bank).

Industrialized countries' economic success has greatly affected northern people, businesses and organizations, and, therefore, their decisions. The constant increase in industrialized countries citizen's disposable income and leisure time expanded northerners' opportunities and alternatives. This incredible wealth is a major driving force behind northerners' investment and consumption decisions. Northern tourists have the greatest amount of income available (Clech), and as a result "tourism rose in the scale of consumer preference, from a luxury to a necessity, [becoming] an essential part of a new mobile way of life" (Lickorish, 38).

"50% of Europeans go away on a holiday, 40% of them taking trips abroad" (37). In 1992, Europe produced one third of the world's GDP, and accounted for 56% of the US\$152 billion spent worldwide in tourism. It is evident that national and world economic health, exchange rates, and market changes influence tourism buying behavior (Cook). In 1988, 75% of Japanese travelers said they had increased their traveling because a strong yen had made traveling abroad inexpensive (Ohashi).

Also, only twice in this century has international tourism's growth rate slowed down: during the 1991 Gulf War, and the 1993 industrialized countries' recession (WTO, 1997). Both of these events threatened the economic well being of northerners, and therefore they reduced their international traveling consumption. In conclusion, the travel and tourism industry has grown at the rate of industrialized countries' growth, and its optimistic expected future growth is also based on northern economies promising forecasts. It is evident that northerners' decisions and consumption patterns are a function of the economic health of their countries.

3.2 Northern Industrial and Technological Progress

This century's economic expansion not only brought an incredible amount of wealth to northerners, but also unimaginable industrial and technological progress. New revolutionary products and services -airplanes, cars, computers, fax machines, and credit cards to mention a few- are constantly changing the way of doing things in industrialized countries. This steady industrial and technological development is the second major driving force behind northern actor's decisions. It has multiplied the types of activities northerners can engage in, and lowered the price of doing them.

In particular, technological development has transformed the travel and tourism industry. “Aviation became established, with almost complete transfer of long-distance passenger traffic to the air. The wide bodied jet aircraft dramatically reduced the cost and time of such travel” (Lickorish, 38). Traveling across the United States, a pilgrimage that took months sixty years ago, can be done in a five-hour flight today. This progress has revolutionized the magnitude and scope of business and tourism. The industrial and technological revolution is constantly enriching and easing northerners’ lives and businesses, in turn influencing their consumption decisions.

3.3 Northern Values and Lifestyle Patterns

However, not only external factors--like the size of their disposable income or the creation of new products or services at lower prices--affect northerners in making their consumption and investment decisions. Northerners are also influenced by their own values and lifestyle patterns. Even though each person, or organization, has a unique life led by unique sets of beliefs, there are four values that appear to influence the majority of northerners. Individualization is one of them. As northerners developed, the economic dependence on the family diminished, elevating individual goals over family or group goals.

Northerners have the opportunity to identify and develop their own personal interests. They study, work and live to reach their own personal goals, and therefore became very independent in their decision making and lifestyle patterns. Today, the tourist market is expanding because more young people and women in ascendancy are traveling (Lipman). The idea of a woman anthropologist traveling independently to study a site, or an adolescent to do water rafting, was not common several years ago. Today, this independence represents one of the most valued principles in the north.

The importance given to education and active learning is a second value seen in the majority of northerners. They demand products and services that provide them with new educational experiences. Northerners want more activity- and learning-oriented tourism, in which they understand and take advantage of the location they are visiting (McIntyre). “[A] 1988 survey conducted by the National Tour Association found that 93 percent of those queried believed that the opportunity to learn while traveling was an important consideration in their travel choices” (Ayala, 50). A third value evident in most northerners is environmental awareness. “Environmental protection has become what politicians call a ‘consensus issue’” (Cook, 127) to northerners, and they will change their buying or investment decision if they see a negative environmental impact.

“Studies of the German and American travel market indicate that environmental consideration are now a significant element of traveler’s destination-choosing process, down to –in the case of Germans- the environmental programs operated by individual hotels. Moreover, environmental quality is now a decisive factor in destination choice for one out of every two German tourists” (Ayala, 50).

Moreover, this environmental awareness has increased parallel to the growth of northerners’ interests in nature. “[M]illions of Europeans are active ornithologists, wildlife photographers, and have conservation interests,” (Travis, 34) and 72% of Japanese overseas trips are with the purpose of enjoying nature (WTO, 1994). The final important lifestyle pattern influencing northerners today is their increasing concern about fitness and health. They “want to be more healthy, eat better foods, enjoy pure air and water, take exercise, diet, enjoy nature” (Travis, 33). Science and medicine alerted northerners of the physical problems related with overweight, stress and habits. Health and

spa tourism used to be only medicinal, remedial and curative. Today, northerners engage in health-tourism for more holistic purposes. They want tourism involving recreational activity, sport, exercise, and to become educated on control of habits, renewing the mind, and dealing with stress.

3.4 Northern Demographic Changes

Northern demographic changes are the fourth major driving force behind tourism's northern actors. As demographics change, northerners make different consumption and investment decisions as a group. The northern consumer has changed and therefore there has been a change in the demand for travel and leisure activities. Current northern demographic changes have benefited the travel and tourism industry because the total number of international tourists has increased, and the types of tourists have diversified. One major demographic trend is the aging of the northern population (Cook).

There is a greater number of active and relatively well to do senior citizens, increasing the senior market demand for leisure products and services (Lickorish). Mature northerners will be a prime market for the travel industry particularly because of their increasing purchasing power and their good health conditions (Cook, Clech). They are already a good and stable market for many tourism sectors, but they will be much larger, stronger, and diversified in their travel preferences.

Another demographic trend is the increase of northern women working and becoming independent. "Women will account for 47% of the US labor force at the turn of the century" (Cook, 122). And, with global business expanding, the number of business travelers, and businesswomen, will increase. Also, as mentioned above, younger people and women are traveling to places they never chose before.

Finally, the number of Americans in their peak earning years, from 45 to 54 years, have increased dramatically during the 1990s (Cook). Reaching this age, experts say the "Baby Boomers" will increase their savings and recreation demands. However, they will have less leisure time, and will demand a greater number of shorter vacations per year. Also, early retirees are entering the tourism market with better health and wealth (Lipman). Northerner's socio-demographic changes greatly influence their consumption and investment decisions.

3.5 Globalization

For northerners, the world is much more accessible today; they can go to or read about any place they are interested in. The media brings detailed scenes of what used to be remote locations into northern homes, while northern universities teach Swahili and global politics. Northerners know that their livelihood opportunities and alternatives are no longer limited to their country or origin, but extend throughout the world. Globalization is the sixth driving force influencing northern consumption and investment decisions.

A world with fewer trade and technological barriers opened up thousands of investment opportunities for northern businesses around the world, and increased their competition as well. Globalization has also broadened the scope of action of northern governments and organizations. Northerners have begun to take responsibility for global problems they did not even recognize fifty years ago. The global environment and economic development of poorer nations are on the agenda of northern organizations today. This wider scope of action – that includes the world-- has greatly influenced northern consumers, businesses, governments and NGOs in their decisions.

3.6 Product Differentiation and Segmentation

Today's marketers attract their customers by differentiating their products or services from the competition. Products and services are designed with unique characteristics to attract the segment of the market that considers these features important. Northerners have a shampoo, a computer, a car, or a stereo for each type of person in the market. This marketing strategy has greatly influenced northern consumption and investment decisions. It has increased the number of products offered in the market, and the sophistication of the requirements of northern consumers. Product differentiation and segmentation is the fifth major driving force influencing tourism among northern actors. Tourism planners differentiate themselves according to the new trends and values of northerners. Today, niche marketing has replaced mass marketing of tourism (Ayala). It is a strategy that positions the destination in the market by responding to the current diversification of tourists' demand.

4. Trends in Northern Tourism Markets

The driving forces described above are changing northern tourism actors and shaping today's tourism market. How have these driving forces influenced today's tourism market trends, northern tourism businesses, northern governments and NGOs?

4.1 Tourism Market Trends

The determinants of demand have changed to benefit tourism. The driving forces have allowed an expansion of the market to include many more people, and to allow a high level of segmentation. Tourism demand as a whole has dramatically increased due to northerner's economic success, new technologies, and globalization. A large mobile population of sophisticated foreign travelers has been created.

Tourist attractions around the world have changed and developed to satisfy these new geographic and activity-based market segments, each with their own characteristics and motivations. Traditional forms of tourism --resorts and urban sightseeing-- remain popular, but have been enriched to satisfy tourists' expectations of environmental awareness, more individual expression, possibilities to learn, and recreation activities. They offer experiences that were considered special interest tourism before.

Special interest tourism emerged a decade ago to satisfy the wide range of activities northerners want (McIntyre). It has grown rapidly to become a collection of unique travel experiences for each tourist (Forbes). Today, special interest tourism takes the client to more exotic and remote places, while providing deep educational experiences. Northerners see special interest tourism as a gateway to new experiences. Adventure, rural, cultural, health and natural tourism are the segments of special interest tourism that are penetrating traditional tourism markets today (WTO, 1994).

Northerners' new lifestyles and values are the main driving force behind these new types of tourism. As northerners have become more individualized, they prefer products that address their specific, individual needs. They want more custom-made tours that allow them to investigate, practice or experience their own special interests. Tourists want individual expression, more opportunities to learn, and more activity, and increasingly reject mass-oriented generic tours.

Nature tourism and ecotourism are high growth areas within special interest tourism. Ecotourists emerged simultaneously with the growth of the environmental protection movement, and the higher educational levels of northerners (WTO, 1994). Northerners' interest in natural environments and traditional cultures takes them to less developed places that lack mass tourism infrastructure. For example, in the United States nearly 6000 birdwatchers from 35 states and 5 foreign countries flocked into High Island during the two-month spring season in 1992. They spent about \$2.5 million in the area, even though High Island has only one restaurant and one motel (Dickinson and Edmondson, 47).

While accurate figures on the number of ecotourists globally are difficult to obtain, it was estimated that there were 235 million worldwide ecotourists in 1988, with an economic impact of US\$233 billion that year (Eagles, 9). Even though this was a small percentage of the total number of international tourists that year, their high rate of growth and affluent character has attracted substantial commercial attention (Ayala). Moreover, ecotourism is a new platform for enhancing the competitive strength of countries and regions as international destinations because very little infrastructure is required, and the economic benefits seem to be higher due to lower leakage.

Like nature tourism, cultural tourism has expanded very rapidly. There has been a dramatic growth in cultural tourism in the US travel market, directed towards experiencing the arts and heritage of a location. It “is the hottest growing area right now in travel and tourism” (Goeldner, 64). Northerners do not want to simply see or eat something new: they want to be linked to the different culture and respect their values, literature, music, arts and crafts (Travis). They seek different places, events, and experiences that have a strong identity.

4.2 Northern Tourism Business

Northern tourism businesses --airlines, hotels, car rentals, and restaurants-- have changed their investment decisions due to these driving forces. “Consumers today are discriminating and demanding. They have a strong sense of value and believe in spending their hard-earned money on high quality, time efficient and environmentally sensitive goods and services” (Cook, 125). This is why environmental awareness has become essential in northern tourism management.

The travel and tourism industry will be forced into environmental responsibility because tourists increasingly demand it. “The great love affair between Americans and wildlife is why 11 major corporations [contributed] \$3.6 million [in 1996] to the Nature Conservancy, up from 3.1 million in 1995” (Dickinson and Edmonson, 48). British Airways worked its way to be in the top 20% of the companies the London Stock Exchange monitors for environmental responsibility, and be ranked by the UN among the top 5 worldwide companies that report on environmental issues (Douglas). The airline’s voluntary standards of environmental awareness will give the company monopoly rents when northerners demand only environmentally friendly airlines, a growing trend.

4.3 Northern Governments and Organizations

Throughout the world, governments are increasingly recognizing the role of travel and tourism, and are making it a strategic development priority. It powerfully stimulates growth and jobs through the multiplier effect. Strong foreign currency enters the country, and as exports increase, it benefits the balance of payments. Since 1992, the governments of Australia, Argentina, Brazil, China, and Japan, have been heavily promoting this sector (Lipman). Moreover, tourism may represent an opportunity for comparative advantage and competitiveness among underdeveloped countries.

The governments of the United States and the European Union, the regions most benefited by tourism, have been the latest to recognize the industry’s importance. Tourism in the United States is the top service exported, and the second largest employer (Dogget). This success seems to come in spite of a lack of government support. In May of 1996, the US Commerce Department eliminated the US Travel and Tourism Agency, making the US the only major country in the world without a national tourist agency. The European Union is beginning to wake up to tourism, after a steady erosion of its market share (Lipman).

5. Factors Affecting the Demand for Costa Rica's Ecotourism

There are plenty of international and national factors affecting the demand for Costa Rica's ecotourism services (Lindberg and Hawkins). International changes occurring worldwide that constantly influence ecotourists' demand function were mentioned above as driving forces. Ecotourists' income, environmental awareness, image and perception of uniqueness of the destination are proportional to the demand for nature tourism; while the cost of traveling is not.

Like international factors, the conditions at the country of destination also affect the ecotourism demand function. An increase in the quality of the ecotourism experience will lead to an increase in ecotourists' demand. The same thing happens with the quality of the attraction: as it becomes better, more visitors will want to visit the attraction. The country's political and economic stability also influences ecotourism demand. Tourists do not want to be in danger and will significantly reduce their demand if they feel insecure. Finally, an increase in the demand for an attraction will lead to an increase in the demand for complementary tourism goods and services. An ecotourist has paid significant costs to be in the country and to visit a particular destination, and therefore will try to get the most out of his tourism experience by visiting other parks, restaurants, and purchasing related goods.

Costa Rica has good conditions for attracting international Ecotourists. The country has a very good image in developed countries; most importantly it has an excellent reputation within the North American tourism market (Lindbergh and Hawkins). Moreover, its attractions and ecotourism experience are satisfactory for Ecotourists. A 1996 survey made by the Costa Rican Tourism Institute to international travelers indicated that 53% of the foreigners interviewed evaluated the protected areas as excellent, and 40% as good (ICT, 1995).

The ecotourism experience in Costa Rica is different from other types of tourist experiences. In other nature-oriented destinations, like Africa, the tourists will always encounter animals and even have to be protected from them. In Costa Rica the tourist must emerge himself into the rainforest to see the biodiversity of plants and insects. Ecotourists must search for the species they want to see. This makes Costa Rica less expensive compared to Africa (even exclusive of transportation), but more expensive than mass tourism destinations like Cancun (Piza, 11/01/97)).

As with any commodity, mass production of tourism reduces the costs and increases competitiveness in the market. The ecotourism experience is differentiated from mass tourism by including personalized services, a site of exceptional value, and a low cultural impact. Moreover, the uniqueness of the Costa Rican attractions is also a factor behind its higher price. Costa Rica's competitive advantage is its high biodiversity located within small distances, which makes the attractions easily accessible to the ecotourist. Finally, Costa Rican tourism-related industries should recognize the increase in demand for their products as complementary goods and services for ecotourism. According to Boo, in the majority of protected areas, tourists are not given enough opportunities to spend money.

Today, the managers of Costa Rican protected areas cannot use a systematic analysis of the demand factors of ecotourism, because no such analytical tools exist (Lindberg and Hawkins). Decision-makers must use their intuition and knowledge of the ecotourism market to know the importance of each demand factor and respond to it efficiently. However, the initial results of a Costa Rican survey suggest that the most important demand factors that influence the appropriate fee level are the

tourists' income, the quality of the experience, the tourist's age and year of education, and the number of protected areas visited in Costa Rica.

6. Definitions of Ecotourism in Costa Rica

The definition of ecotourism is widely known by ecotourists. They know that “[e]cotourism is about creating and satisfying a hunger for nature, about exploiting tourism’s potential for conservation and development, and about averting its negative impact on ecology, culture and aesthetics” (Lindberg and Hawkins, 8). The Ecotourism Society gives the most widely accepted definition of ecotourism: “responsible travel to natural areas which conserves the environment and sustains the well being of local people” (8).

Lewis Stringer (1994) makes clear in his work, Tourism in Costa Rica: Vanguard or Old Guard, that there is no single universal definition for ecotourism in Costa Rica, and the term ecotourism has as many different meanings as people want to give it. The concept is often presented ambiguously in the media and in the tourist industry itself. Tour operators and government agencies in Costa Rica use the term to attract a growing population of travelers who are concerned with the environment. The incentive to do so is great, as shown in a study by the Travel Industry Association of America (1991) which demonstrates that 85% of travelers were predisposed to pay more for the “privilege” to experience a well-preserved natural environment.

The problem arises when the supply side of tourism, that is all the tourism-related businesses, define ecotourism. Since there are no widely accepted principals that define an ecotouristic hotel, restaurant or attraction today in Costa Rica, many establishments brazenly promote themselves as “green” or ecotouristic without backing up their claims.

The supply of ecotourism services in Costa Rica began with hard-core ecotourism offerings. The economic benefits that ecotourism brought gave incentives to other tourism businesses, referred to by many ecotourism pioneers as “greenwashers,” to capitalize on the image the pioneers had created and abuse the concept of “eco” and/or “sustainability” to capture more rents (Piza, 11/01/97). Greenwashers are free-riders on the public good—the global image of Costa Rica as an Eco-destination—created by the early ecotourism providers.

Difficult questions are raised by this greenwashing phenomenon. Most notably, when large international tourism service providers raise their brand flags in Costa Rica, then promote these services to potential consumers in developed economies, they tend to promote their offering cloaked in a green cape. They promote their service in the context of ecotourism. Naturally, they want to capitalize on peoples’ interest in Costa Rica as a natural destination. But critics are concerned that these organizations are capturing rents from the investments made by ecotourism pioneers, many of whom committed life savings to the purchase and protection of rainforest (often at suboptimal rates of return when compared to conventional investment returns).

These newer entrants into the tourism economy of Costa Rica, however, may be making unnoticed contributions that will help the pioneers realize their fair returns. Given a limited national budget for tourism promotion, the private promotions of Costa Rica (for example by tour wholesalers/operators, or hotels) as a natural destination has undoubtedly led to greater visibility and probably increased visitation as well. These visitors spend money visiting protected areas. There is no easy way to compare the value of land protection investments with promotion expenditures, so the friction between hardcore and softcore operators catering to eco-conscious travelers is likely to continue.

Increasingly, however, it may be difficult for greenwashers to get away with unsubstantiated claims. The Costa Rican Tourism Board will officially launch the Certification for Sustainable Tourism

during 1998 that will attack directly “greenwashers”. This optimistic program will classify tourism businesses on their degree of sustainability. The program will create standards that will define tourism businesses. It will also assure that the expectations of future ecotourists have when coming to Costa Rica will be fulfilled; that is that both- the supply and demand- will have the same definition of ecotourism.

For the purpose of this study we will define ecotourism as the Ecotourism Society does, bearing in mind that responsible travel is characterized by visitors having the motive to understand the cultural and natural history of the environment.

7. Key Actors in Costa Rican Tourism and their Policies

The two public sector actors that most directly impact tourism are the Costa Rican Tourism Board (ICT), and the Ministry of the Environment (MINAE). While there are other governmental agencies that have a strong influence on the sector (e.g. public safety, infrastructure, etc.), these are the two with the most direct stake and impact.

7.1 Costa Rican Tourism Board (ICT)

The ICT is a Ministry of the federal government whose budget comes primarily from taxes on tourism activity. The ICT is responsible for tourism development and regulation in Costa Rica, tending to such issues as transportation, infrastructure, foreign investment, promotion/advertising, and zoning.

Although ecotourism is the niche that put Costa Rica on the map of the global tourism industry, it has not been the focus of the development efforts of ICT in the past. Incentives provided for investment by ICT were typically designed to attract large scale, mass-tourism style destination developments, rather than ecotourism development. These large projects, both conceptually and practically speaking, do not tend to be consistent with the image or reality of ecotourism as originally pioneered in the country.

However, in the last few years, the ICT has changed its policy regarding tourism to promote and guarantee that the concept of ecotourism retains integrity. Today, nature figures prominently in the international promotional campaigns for Costa Rican tourism, and the ICT is launching a regulatory initiative that is the hallmark of the ICT's attention to ecotourism. The ICT's Natural Resources Department created the Certificate for Tourism Sustainability (CST) as a tool for guaranteeing that mass tourism or "greenwashing" will not destroy ecotourism.

7.11 Certificate for Sustainable Development

Analyzing the tourism trends in Costa Rica for the last five to ten years, the ICT recognized three evident trends (Lizano, 1998). The first trend is a change occurring in worldwide tourism due to new driving forces in the north. The WTO estimates that non-dominant tourism (which includes all the new forms of tourism that are not sun and beach) will grow at a rate of 25% to 30% annually, while traditional tourism will grow at a rate of 2% to 4% annually.

The second trend the ICT recognized is that tourism in Costa Rica in the last ten years has been mostly ecotourism. "All tourist attractions in Costa Rica are based on natural resources", and ICT surveys found out that more than 70% of tourists that come to Costa Rica are interested in non-dominant tourism (Lizano, 1998). Moreover, Costa Rica's tourism infrastructure is mostly ecotouristic: 80% of Costa Rican hotels have less than 40 rooms. The third evident trend in Costa Rica in the last ten years is the emergence of "greenwashers", businesses that --without being ecotouristic-- take advantage of Costa Rica's ecotouristic image and use it as a marketing tool.

Recognizing these three trends in Costa Rica's tourism, the ICT knows that it is in the best interest of Costa Rica, being a mainly ecotouristic destination, to maintain its position in the nature tourism market because of the wonderful growth perspectives the ecotourism segment has. The ICT also realized that greenwashers, not being ecotouristic but claiming to be so, lower the quality of Costa

Rica's ecotourism and could eventually damage Costa Rica's good reputation as a nature tourism destination.

From this analysis, the ICT recognized that tourism has economic and conservation elements that need to be in balance, and are not in balance at the time in Costa Rica. Today, there is much more interest and activity in the economic aspects of tourism, while the conservation aspects, which include the maintenance of the natural resources, culture and society, have been forgotten. The ICT claims that the imbalance of the economic and conservation elements of tourism is the main problem of Costa Rica's tourism. It is the reason why greenwashers claim to be ecotouristic only to increase their rent capture, without doing any conservation activity.

The ICT envisioned a program with the main objective of balancing the economic and environmental elements of tourism in Costa Rica: "[i]t is time to change the tourism tide to a more integral one, namely, sustainable tourism" (CST,2). The ICT defines sustainable tourism as

"the balanced interaction of three basic factors within the tourism industry: 1-Proper stewardship of our natural and cultural resources; 2- Improvement of the quality of life of the local communities; and 3- Economic success, that can contribute to other programs of national development " (CST,2)

To reach such vision, the ICT is currently implementing the Certification for Sustainable Tourism program (known also CST), with the main objective of turning the concept of sustainability into something real, practical and necessary in the context of a country's tourism competitiveness. The program aims at "improving the way in which the natural and social resources are utilized, to motivate the active participation of the local communities, and to support the competitiveness of the business sector" (CST,2).

The CST program categorizes and certifies each tourism company according to the level of impact it has on sustainability. Four fundamental aspects of sustainability are evaluated through a questionnaire:

"1- *Physical-biological parameters*, evaluates the interaction between the company and its surrounding habitat;

2- *Infrastructure and services*, evaluates the management policies and the operational systems within the company and infrastructure

3- *External clients*, evaluates the interaction of the company with its clients terms of how much it allows and invites the client to be an active contributor to the company's policies on sustainability;

4- *Socio-economic environment*, evaluates the interaction of the company with the local communities and the population in general" (CST,3).

The performance on each field will be graded on a percentage basis. The tourism companies are classified into five sustainability bands, granted by using the lowest percentage achieved in the four fields evaluated. The following table shows the five sustainability bands and the corresponding percentage of fulfillment needed to obtain each band.

Certification on Sustainable Tourism

Sustainability Bands

Band	% fulfillment
0	20%
1	20% - 39%
2	40% - 59%
3	60% - 79%
4	80% - 94%
5	more than 94%

In terms of sustainability, the degree of fulfillment represented by each band should be concomitant with the different aspects mentioned. For example, to achieve a band 3 category, it is necessary to complete at least with 60% of the established conditions for the four areas evaluated. Using the lowest percentage of fulfillment in the four levels gives incentives for equal development in the four sustainability aspects. After the evaluation and classification, the tourism company will be given a sticker with the logo and level of band achieved.

The ICT plans to have private companies doing the questionnaires, while a committee of four specialists in each of the four aspects will audit the results of the classifications. Moreover, this ICT committee will be monitored by a higher committee formed by people from the ICT and other governmental and non-governmental institutions.

The planning of the CST program took three years, and its implementation is already started. The CST program is voluntary so that only interested businesses will join, and its efforts are not ruined by businesses that --because of the mandatory requirement-- cheat the authorities. Eventually, the ICT knows that being on the CST program will be necessary to compete. The program was designed for all types of companies in the tourism industry, but the first stage will include only lodging companies. Even though, the CST program has not been officially launched yet, by December of 1997, 100 hotels were already inscribed, 31 were visited and 9 were categorized.

The CST program has enormous implications for the Costa Rican tourism sector. The CST is a new way to differentiate Costa Rica's tourism industry with respect to its competitors. "Undoubtedly, this will enhance the country's image as an authentic destination for naturalist tourists, thus increasing considerably the competitiveness of our national tourism product" (CST, 5). It also directly attacks "greenwashers" by providing reliable information on the firms that are really making progress in producing sustainable tourism. Moreover, the CST motivates tourism executives to improve their use of company resources, promoting savings and their efficient utilization. Finally, the CST program will increase the demand, and therefore the development and production, of goods and services by firms with a sustainable orientation. This will strengthen an industrial sector that operates within parameters of sustainability. Tourism will lead the way into making a more sustainable Costa Rican economy.

The ICT's policy, through its CST program, intends to balance the economic and environmental aspects of Costa Rica's tourism. Moreover, the certificate will lower the information costs between tourists and ecotourism hotels and attractions in Costa Rica. In the future, tourists can check the band of sustainability a hotel has and decide if it satisfies them before arriving to Costa Rica. Therefore, their expectations of ecotourism be satisfied: if they choose a level 1 hotel, they know

that it will not be as ecological as if they had chosen a level 5 hotel, but it is certainly more ecological than if they had chosen an unclassified hotel. Ecotourists, thanks to the CST program, can be sure of their tourism choices in the future, and will have a smaller probability of being disappointed.

7.2 Ministry of the Environment (MINAE)

MINAE is responsible for managing the protected areas system of the country. Within MINAE, SINAC was created to manage more than one hundred protected areas that are divided into 11 Conservation Areas. They include all the national territory in addition to the protected areas, so that conservation as an integrated process is guaranteed. This integration is meant to coordinate with other agencies, including:

The Governmental Forestry Administration (AFE), in charge of the conservation of the forestry resources of the country. The AFE manages with the National Fund for Forestal Financing (FONAFIFO).

The Director General for Wildlife (DGVS) which plans, develops and controls the flora and fauna of Costa Rica. The DGVS manages the Wildlife Fund.

The National Park Service (SPN) is in charge of the development and administration of National Parks, assessing in legal and policy issues to MINAE. The SPN manages the National Parks Fund, which in 1996 had a deficit as a result of a decrease in the entrance fees.

SINAC needs better infrastructure and visitors' services to achieve a proper conservation of the areas they manage. The total system expenditures during 1996 were nearly US\$ 11,000,000. Nevertheless, SINAC funds are inadequate either to finish buying appropriated lands or to finance operating budgets, including basic protection. SINAC needs to spend approximately an additional US\$ 2,000,000 on infrastructure development to meet its objectives (Olson). From the 126 different protected sites in Costa Rica, there are only 25 with finished General Managerial Plans, and only 3 which are officially declared in status of protected areas in Costa Rica (MINAE). Detailed plans exist, but no funds are available to carry out these plans.

In Costa Rica ecotourism has been linked to the development of the National Park System. The first protected area dates from 1963, and since then new areas have been added up to compile 126 different sites. While tourist arrivals grew, and it was obvious National Parks had an important role to play, an antagonistic relationship between tourism development interests and the conservationists began to develop. It was clear that the protected areas system was not designed to accommodate the increasing number of tourists, but for preserving natural habitat (Rovinsky, 1993). This was predictable in that neither economic nor social implications had been considered during the development of the protected areas. It was not until the mid-1980s that MINAE began to take economic analysis of protected areas seriously.

Table 3
PROTECTED AREAS OF COSTA RICA

Categories	Number	Extension (1,000 Hectares)	% of Total Protected Areas	% of Total Country
National Parks	23	837	52	16,4
Biological Preserves	10	41	3	0,58
National Monuments	1	0,3	0	0
Forestry Preserves	12	291	18	5,7
Protected zones	32	191	12	3,6
Wildlife Refugees	34	197	12	3,86
Swamps	14	50	3	1
TOTAL	126	1,608	100	31,2

Source: SINAC and Bermudez, A. in Monestel; SPN in Lizano, R., 1997.

7.3 National Parks Entrance Fees

By 1993, a tripartite commission was created in which ICT, CANATUR and MINAE could discuss the topics of economic analysis of protected areas with the aim of integrating them into the decision making process. The two major topics selected as top-priority were financing of the protected areas (which covered the economical issue) and negative environmental impact protection (which covered partially the social issue). The link between these two topics is the entrance fee policy to National Parks.

Entrance fees, which are set by MINAE after consulting the tripartite commission, go back to the Costa Rican treasury. The budget that will be spent on national parks is set by the Costa Rican congress.

Governmental and private institutions set the entrance fee to the various Costa Rican protected areas according to the objectives they have. Fees may be set to maximize profit, just like any other business, or to maximize social welfare. Also, they might be reduced to bring people into the region and benefit the area's related industries. Regardless of the objective of setting fees, a "knowledge of the demand for the ecotourism attraction will be necessary to set fees. That is, how many tourists will visit the attraction and how much are they willing to pay?" (Dixon and Sherman, 84).

The changes in National Parks entrance fees in the last years and their effect in demand will be discussed in section 9, Willingness to pay for Costa Rica's Ecotourism.

Table 4
NATIONAL PARKS INCOME DUE TO TOURISM IN THE 1990's

Year	Colones (millions)	Dollars (thousands)	Visitors (thousands)
1990	24	242	453
1991	40	340	496
1992	76	579	639
1993	147	1016	772
1994	237	1501	700
1995	465	2585	635
1996	-	-	659

(-) No data available.

Source: Bermudez, F., 1996; in Monestel, L. 1997.

7.3 Private Sector Actors

There are private sector counterparts to both MINAE, with respect to protected areas, and to ICT. Private reserves have always existed in Costa Rica, but it is with the concept of “buffer” zones that their importance has risen as a complement to the large public reserves (Bien). The growth of private reserves has been explosive. From the three members the Red Costarricense de Reservas Naturales had before 1980, in 1997 there are more than 50, accounting for 1% of the national territory. Property-owners eligible to join the association may hold up to 5% of the land in the country.

Table 2
PRIVATE NATURE RESERVES : A HISTORICAL REVIEW

	1989-90	1991-92	1993-94	1995-96
Number of reserves	15	20	26	29
Per cent increase in number of reserves		33.3%	30%	11,5%
Average price per person	\$61.5	\$61.7	\$73.3	\$73.3
number of operations for which price information is averaged	10	17	22	26
Hectares of reserve	16,260	436 added	3093 added	745 added

Source: Olson, N., 1997.

There are four categories of private reserves:

1. Non Governmental Organizations (NGO's): There are approximately 20, and their properties tend to be large.
2. Ecotourism operators: Bien estimates that there are around 150 in this category with properties averaging 200 hectares. They have educational, scientific, conservation or tourist purposes. The capital comes from banks and investors.

3. Conservation-minded landowners. This group of property owners has often inherited their land. There are several hundred of them, varying in size.
4. Peasants. Based on a FUNDECOR estimate there are 1,500 landowners who are engaged in some form of land conservation.

Public-private partnerships with regard to protected areas remain untapped opportunities. The potential partnerships (De Shazo) could take various forms:

1. Tourist Development Partnership. The park service provides tourist destinations that attract visitors from whom the tourism industry benefits through a set of charges and fees transferring financial resources. This already happens in Costa Rica, 60% of the ICT is financed by the taxes on tourism services (for example, 3% tax on hotel rooms and 5% tax on international travel purchased in Costa Rica). But there are still centralized structures that do not allow the money to be entirely used for conservation purposes. On the other hand, the concept of user fees plays little part in the actual financing of visitor management in protected areas. It has been stated that while 70 agencies sell tours to the protected areas, only 5 agencies collaborate in some manner with the national parks (Salazar, S., & Evans-Pritchard, D., 1992).
2. Corporate Sponsor Partnerships. This associates National Parks with private, for-profit businesses that value the protected areas as sanctuaries of the nature heritage. This can be achieved through contributions, licensing fees, donation of equipment, etc.
3. The Service Provision Partnership. This opportunity involves businesses providing improved or even new services to the park at competitive prices. This has already been developed in Costa Rica on a limited scale. Volcano Poas is a model of this type of partnership.

The private sector counterpart to ICT is the National Chamber of Tourism (CANATUR), represents the interests of the private tourist sector as a whole. Politically, it is the most powerful private institution dealing with tourism, and observers claim that it tends to be oriented to the interests of hoteliers inclined towards mass tourism.

Other private sector institutions include the National Chamber of Tourist Microentrepreneurs (CANAMET), who have in recent years promoted to small firms in the tourism sector the concept of environmentally friendly business practices; the Costa Rican Network of Private Preserves; and a diverse group of local and international foundations, cooperatives and NGOs. Among others there are the following: Fundación Neotrópica, Ecotourism Society, Fundacion Ebert, Center for Tropical Studies (CST), The National Institute of Biodiversity (INBio), “Universidad para la Paz”, “Consortio Cooperativo Red Ecoturística Nacional” (COOPRENA), “Fundación Taller Internacional de Servicios” (TAIS), “Asociación Costarricense de Promoción del Turismo” (ACOPROT), etc.

8. Major Environmental Impacts of Tourism in Costa Rica

Tourist activity can have impacts of various types: environmental, cultural, economic and social. According to Briassoulis (1992) the environmental impacts of ecotourism are difficult to categorize, identify and measure due to the fact that ecotourism relies completely on the conservation of natural resources which are generally public property.

Although tourism is in fact an “industry with no chimneys”, it has been widely observed that tourism development can destroy the environment. The case of the Spanish Mediterranean coast is an example. Though Costa Rica seems to have avoided the more deleterious effects of international tourism present in many other developing countries (Chant, 1992) the country is now at a crossroads on how to continue developing in a sustainable manner. As conservation does not imply preservation and to achieve it there must be an economic input, it seems ecotourism fits perfectly well to fill this gap. In this section we will try to review the environmental impacts that arise from the development of ecotourism in Costa Rica.

The major environmental benefits are:

A) Direct contributions to environmental conservation causes on the part of the tourism sector are one major source of benefits.

There are two outstanding examples of such contributions. The “Park Rangers Fund”, administered by “Fundación Neotrópica” an NGO based in Costa Rica, was launched in 1992 with a combined gift of US\$ 25,000 from Horizontes Nature Tours and Costa Rica Exhibitions, two Costa Rican tour operators focused on ecotourism (Horizontes, 1992). The objective is to improve the living and working conditions of park rangers. So far the fund has disbursed over US\$38,000 as well as over 1,000,000 colones.

The second contribution is the ICT’s environmental program, which are very diverse. Some particular projects include:

The preparation of “General Managerial Plans 1995-99” for the National Parks and “Regulatory Plans for the Miritime Terrestrial Zone”;

\$8,000,000 colones for the Poas visitor center in 1991;

\$12,000,000 colones for the construction of trails at Carara in 1993; among many others.

Nevertheless the importance of these programs when looking at the ICT as a whole is very small. From 1991 to 1995 the average expenditures on environmental projects as a percentage of total ICT expenditures was only 4% (Olson N., 1996).

Table 5
ICT FINANCIAL EXPENDITURES ON ENVIRONMENTAL PROJECTS, 1991-1995.
(in million Colones)

TOPIC	1991	1992	1993	1994	1995
Conservation	13	4,5	17	0	43
National Parks planning	0	0	40	60	3
Coastal zone planning	7	4,4	30	49	19
Research and Program Development	0	0	3	17	3
Environmental Education	0	6	12	2	13
Publicity	0,5	1,6	1	0,1	14
TOTAL	20.5	16.5	103	128.1	95

Source: Olson, N., 1996.

B) Conservation activities by private reserve owners are another source of benefits. Although the majority of conservation in Costa Rica is neither motivated nor financed by tourism revenues (Amos Bien, coordinator of the “Red Costarricense de Reservas Privadas”, in Naomi Olson, 1997), tourism in general, and ecotourism in particular, are making substantial private conservation activity financially possible. Private investments in conservation for tourism provide environmental benefits in terms of biodiversity conservation, watershed protection and carbon sequestration.

Eco-efficient and environmentally friendly hotel operations are a third major source. Though these are terms also used to “green wash” businesses due to marketing advantage, thoughtfully sited and constructed hotels exist, as do those whose operations are carried out to minimize environmental impacts. It is possible that Costa Rica has avoided some negative impacts of hotel siting, construction and design simply due to the fact that the great majority of its hotels are small. 70% of the hotels in Costa Rica have fewer than 20 rooms (Price, M., 1996).

Though big hotels are actually more capable of getting economies of scale in certain types of environmental mitigation investments, they normally are in places where demand is high and primary factors to be environmentally friendly have not usually been taken into account from the beginning. Nevertheless, in a study of 92 lodges located around national parks (so they are not a representative sample from the total) done by Segleau, J. (1995) over two years, 49% of them were doing “more than necessary” to pursue their environmental bottom line.

Creation of local jobs is yet another source of benefits. The best documented example and biggest success in Costa Rica is Monteverde. The tourism industry in Monteverde has resulted in the creation of some 80 different businesses, of which a significant percentage is locally owned. They are diversified among hotels, restaurants, cafeterias, craft and bookstores, cooperatives, etc. In total, more than 400 full -time and 140 part-time jobs have been directly generated (Williams, 1992).

Nevertheless, local people now face the challenge of consolidating an activity that has traditionally been seasonal and often fleeting in character (Price, M., 1996). They must effectively convert tourism and conservation to a solid and long-lasting productivity. Furthermore, they should incorporate it as a way of life and a part of Costa Rican culture, so that better diffusion of the activity

is achieved.

Finally, environmental education activities should be taken into account as benefits. In many definitions of ecotourism, tourist education is fundamental. There is a strong indication that "...nature-based tourism has served to focus public attention on public conservation areas and greatly increased their inherent value in the minds of Costa Rican citizens...heightened awareness has led to greater park visitation by Costa Ricans..." (Piza, 07/1997). The Rainforest Aerial Tram, whose visitors acclaim the educational aspect of the experience, has received in the last three years over 150,000 people, including 15,000 students who are admitted at no fee. The rainforest awareness initiative of the tram is a particularly good example of this type of benefit.

The major negative impacts of ecotourism:

Environmentally destructive business siting, construction and operation are becoming more and more of a serious problem. According to Lawrence Pratt (in Naomi Olson, 1997): "...most of the negative environmental and social impacts of tourism are predetermined in the siting, design and construction phases. There are too many cases where developers build a hotel or destination that is an environmental disaster, institute a water reduction and recycling program, and then demand a rating as an environmentally responsible business".

One of the more extreme examples of environmentally destructive siting in Costa Rica took place in La Cruz, Guanacaste where seven tourist developments found that their site delivered only salt water. With respect to construction practices, in Costa Rica it has been a frequent cause of destruction of vegetation, soils and aquatic resources. At Papagayo, in Guanacaste dumping of construction wastes has damaged coral reefs. At Playa Tambor it has involved filling in mangroves.

Damage caused by visitor impact in areas of conservation is another source of concern. The use of natural areas over their "carrying capacity" leads them to degradation. There is evidence that this is happening in some locations. For example, Leslie Haysmith, Hoare et al. (199) reported the trails at Chiripo and Poas to have suffered damage. Other may include divers touching tropical fish, leaving them susceptible to infection, migration of monkeys from Cabo Blanco reserve since it opened to the public are reported to be have decreased the population of the howler monkey up to 40% and the white-faced monkey up to 27%.

Another source of concern is image inconsistency. The majority of visitors to Costa Rica (approximately 70%) have an interest in "sun and beach," which is usually associated with the category of mass tourism. However, the Costa Rica tourism market is a segmented one. The central mental image that most foreigners have of the country is one of a peace-loving, friendly, idealistic place of special natural beauty (Naomi Olson, 1997). An example of a change of image from a natural history to a sun and beach destination is given by Louis Wilson of Hotel Las Tortugas at Playa Grande in Guanacaste. He arrived at Tamarindo over 20 years ago and tells of how the development at Tamarindo due to hotels, lights and large scale visitorship coming to photograph turtles near to the sea, is changing the experience and image for the visitors to this area (in Naomi Olson, 1997)—not to mention the actual destruction of turtle nesting patterns.

Because it is typically considered part of the definition of ecotourism, we must also consider the impact of ecotourism on local culture. Despite the deeply rooted tradition of democracy in Costa Rica, the formal mechanisms for local participation in tourism and resource management in general are very few (Meadows, D., 1993). This set the trap for the transformation of the local communities.

A good example of this is the study of 22 tourist projects taken from the ICT list to obtain the “Contrato Turístico” (Tourist Contract). 77% of these projects violated the **stated principals of** ecotourism on cultural grounds (Umaña, F., 1996).

Nevertheless, besides Monteverde, there are some very good particular examples that leave an open door for a change. ATEC (Talamanca Association for Ecotourism and Conservation) is an NGO bordering the Costa Rican section of the International Park of “La Amistad”, attempting to force the government for legislative reforms to assure development that is in the interest of local people. The indigenous reserves at Talamanca are an example of what indigenous groups (who still represent an average 5% of the total population in Latin America) can accomplish through ecotourism.

9. Willingness to pay for Costa Rica's Ecotourism

For most goods and services, prices are established in the market place through the process of buying and selling. However, there are market imperfections that make it extremely hard to value certain goods and services. These market imperfections are conditions that prevent normal market operations. Many of the benefits of natural protected areas, such as their ecological, biological or aesthetic value are subject to these market imperfections, and therefore it is very hard to know their total economic value. Without a market-place, the willingness to pay that individuals normally compare with the price when making a purchasing decision is unknown.

For example, biological diversity is widely recognized as important, but how much money is it worth? Biological diversity is not sold around the corner or produced and bought regularly like a commodity. "Environmental goods and services often have no market price tag and a considerable amount of uncertainty can surround their true value and significance" (Turner, Pearce, and Bateman, 108). The problem is that if these market imperfections are not adjusted for, these goods and services will have distorted market prices that do not reflect their true value. All Costa Rican public and private protected areas are subject to these market imperfections. They face non-rivalry, non-exclusivity and offsite effects that distort their market prices.

Non-rivalry occurs when the total supply of a good is not diminished when enjoyed by consumers (Dixon and Sherman). A tree or a river is not like a car or a hamburger that once consumed becomes part of the buyer. Costa Rican protected areas stay there to be used by the following visitors. There is no rivalry among consumers because there is 'enough' for everyone in the short-run. This is a market imperfection because, in the long run, the rainforest will be scarce, and the amount consumed by each visitor was not charged appropriately.

Costa Rican protected areas are undervalued because of their non-excludability, too. Everyone receives the same level of benefits from an attractive view, clean air, and pure water; these are all non-excludable goods. Costa Rican natural parks were bordered and put under protection to reduce their non-excludability, and the negative externalities often related with it. Today, visitors cannot cut a tree just because they want to, as they might have thirty years ago. However, non-excludability allows many people to benefit from the natural reserves freely: the park's water is enjoyed by downstream users.

"Since they cannot be excluded from enjoying its benefits, there is no incentive for these users to reveal how much the park is worth to them. As a result, [public or private managers] cannot easily estimate and charge for all the benefits this areas provided" (Dixon and Sherman, 28-29). Moreover, the benefits of a protected area go beyond national borders, and the country protecting the area is freely providing benefits to the world.

Rainforests have a major role in carbon cycles, climate regulation, and genetic resource conservation (Kramer and Mercer). People who live thousands of miles from where protection activities take place benefit from these services. However, these beneficiaries never ordered these services, so they are not required to pay for them either. Worldwide natural protected areas, including the ones in Costa Rica, are undervalued because their total real benefits are neither accounted nor paid for.

Market adjustments are necessary to recognize the total economic value of Costa Rican protected areas. Regardless if the benefits are paid for or not, if the total economic value of environmental goods is not well estimated, less than the optimum amount of protected areas will be established in

the world (Dixon and Sherman). Further, developed countries could be ‘free riding’ in the sense that they are greatly benefiting from the existence of these natural areas, while these areas are undervalued, and mostly located in poor developing countries.

The ‘free’ benefits received from these types of goods are known as the consumer’s surplus, or the net willingness to pay (WTP). The gross WTP is the price consumers paid to enjoy the benefits plus the consumer surplus. Therefore, to make the appropriate valuation and price changes to these goods, the net WTP must be known.

9.1 The Total Economic Value Concept

The total economic value of Costa Rican protected areas and their future development options is the sum of their use value, option value, and existence value (Turner, Pearce, Bateman). Their use value includes the direct and indirect benefits provided by the parks. These include recreation benefits like hiking, surfing, rafting and bird watching. Enjoying a television show, a magazine article, or a bird analysis about Costa Rican parks are direct benefits, too. Costa Rican protected areas also provide essential environmental functions that indirectly support economic activities and human welfare. These include medicine investigation, plant genetics, education, nutrient recycling, watershed protection, air pollution reduction, microclimatic functions, and carbon store.

Swanson and Barbier highlight the importance of measuring these benefits: “if mechanisms are not in place to appropriate the value of genetic resources[,] the full value of wildlands will not be appreciated and the depletion of genetic stocks will continue” (Swanson and Barbier, 60). Moreover, these protected areas are an option of future use for many individuals. This hope of someday having the opportunity to visit a certain area or observe certain species in the wild is their option value. Finally, some individuals are satisfied just to know these parks exist; this is called the existence value.

9.2 Methods of Evaluating Costa Rican Protected Areas

It is very hard to measure the total economic value of environmental goods and services, but recently progress has been made placing monetary values on many of these benefits (Dixon and Sherman). Costa Rican protected areas are worth what the world society is willing to pay for them. But, how can we know their willingness to pay? How do economists quantify the monetary benefits of protected areas? There are many methods that try to express non-market environmental goods in monetary units. These methods have been modernized over time, but all of them have limitations. Still, if they are carefully applied, they provide valid and reliable estimates.

About ten different valuation techniques exist, and a number of them can be applied to the valuation of Costa Rican parks (Dixon and Sherman; Turner, Pearce, and Bateman). The first type of techniques is based on market prices. The *change-in-productivity approach* and *loss-of-earnings approach* evaluate the changes in the park’s productivity or human productivity due to a change in environmental use. The second type of technique tries to estimate the value of the parks by analyzing the price paid for a closely associated good that is traded in the market.

Ideally, the surrogate good chosen should be a perfect substitute for Costa Rican protected areas. These include methods like the *property value approach*, which tries to eliminate all the variables that determine the real state price, but the environment, and therefore determining the environment’s value. Properties located next to natural areas or with scenic views have higher prices. That extra value given by the environment is what analysts try to find.

The *wage differential approach* finds the difference in wage levels for similar jobs in different environmental areas to evaluate the environment. Finally, the *travel cost approach* has been widely used to value recreation benefits from protected areas, like the ones in Costa Rica. This approach uses the pattern of recreational use of a park to derive a demand curve and estimate the total amount of consumer's surplus. It assumes that people react to increased travel costs as they would react to increased fee rates. Increasing travel costs are then the surrogate for increasing admission fees, and are used to determine consumer surplus and willingness to pay.

This technique surveys visitors to find out the distances they traveled. Knowing the costs and the quantity of visitors that incurred them, a surrogate demand curve is created. Normally per capita use of the park will decrease as distance to the park increases. This is an excellent technique to estimate the recreational value of an area. Using it, analysts have found that “[t]he fees for park use are often much lower than the individual would actually be willing to pay” (36).

The third types of techniques used are based on surveys. Surveys are necessary when dealing with barter goods that never enter the market, and therefore the market and surrogate market techniques cannot be used. The only way to find out the net WTP is to question individuals about their reactions (Dixon and Sherman). The *Contingent Valuation Method* (CVM) finds the total value of the good by measuring the consumer's surplus and adding it to the price. It measures the consumer's surplus in two ways: *compensating variation* (CV) and *equivalent variation* (EV).

CV is the payment that individuals require to be equally well off if they are forced to face new circumstances that are not as favorable. It is the compensation they demand for giving up a right or the WTP to get the right. EV differentiates from CV, in that the satisfaction level is measured after the change is made, and not before like in CV. EV measures how much money individuals are WTP to avoid returning to a situation, or their willingness to accept (WTA) to forego returning to the original situation. The WTP and WTA reflect the individual's preferences, and the value of the good in question they have in their minds (Pearce and Moran). Theoretically, these two measures should be similar, but in most studies they are not. Personal income limits individuals in the WTP and not in the WTA, making the later several times larger than WTP in practical studies.

Economists measure CVM mainly by doing five types of surveys (Dixon and Sherman). *Bidding game surveys* ask individuals the maximum and minimum amount they would pay for certain environmental good. The surveyor could ask for a single bid or an open-ended bid, and get a minimum WTA compensation. Another survey, *the take it or leave it experiment*, offers individuals a certain amount of money for a situation. They have the option to take it or leave it. *The trade-off game* asks individuals to choose between two bundles of goods, each with different amounts of environmental protection and price. Surveys asking for money returns cannot be done with individuals with barter economies. Economists overcome this by using the *costless-choice method*, where individuals are asked to choose between a good and an environmental situation, instead of money. Finally, economists try to find the WTP or WTA using the *Delphi technique*. Experts are asked to evaluate, discuss and reevaluate a good in question many times until the final value is determined.

The fourth type of techniques used to evaluate environmental goods or services is based on costs found in the marketplace. Instead of measuring the benefits, these techniques measure the costs of changing the environmental good or service into alternative uses. The *opportunity-cost approach* measures the opportunity cost of changing the environmental good. There are also *expenditure-*

based approaches that measure the costs of negative environmental impacts. The *preventive expenditures method* measure the total costs actually incurred to protect the environmental area. The *mitigation-cost approach* measures the potential costs of reversing an environmental damage. The *replacement-cost approach* compares the costs of preventing an environmental damage with the cost of replacing the productive assets destroyed by the damage. The *shadow project* looks at the costs of having a substitute for the environmental good or service that was damaged. If a forest provided firewood, then this method would measure the costs of getting firewood from somewhere else.

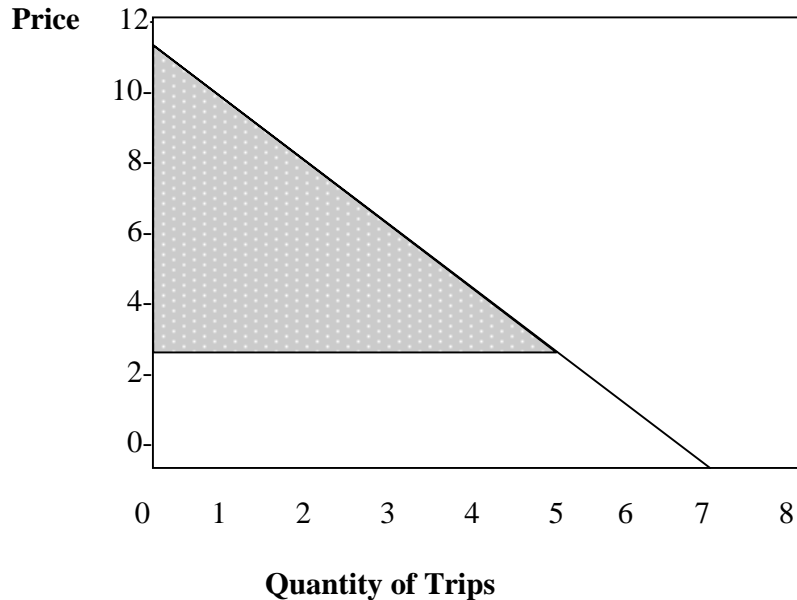
9.3 Valuation Methods Applied to Costa Rican Protected Areas

There have been few attempts to estimate the value of wildlife tourism in developing countries (Swanson and Barbier). “Of the limited selection of studies that do exist on the value of wildlife tourism, the valuation is usually confined to the direct costs and benefits of tourism, with little, if any, analysis of external impacts of wildlife tourism” (143).

Probably the most complete of the studies that evaluate Costa Rican protected areas is Tobias and Mendelsohn’s 1991 estimate of the value of ecotourism at Monteverde Cloud Forest Biological Preserve (also known as MCRF). Using the travel cost valuation technique, and “[b]ased on data from the reserve’s headquarters on the frequency of ecotourists visits, distance from the site, population density and illiteracy rate from each of Costa Rican eighty-one cantons, the authors derived a demand function for visits to the site” (145).

Figure 1 shows the travel cost demand function Tobias and Mendelsohn derived for the protected area. It shows the willingness to purchase different quantities of trips as the travel costs change. Like in any downward sloping demand curve, as the travel price increase, the quantity of travel trips demand reduces. It also shows the consumer surplus, or net WTP. With an entrance fee of \$3, the consumer surplus is the shaded area below the demand curve and above the cost line. Knowing the consumer surplus for each canton and adding all of them up, the analysts came up with a “national recreational value of the entire site of approximately \$100,000 per annum” (145). They also calculated a present value of the MCRF, using a 4% real interest rate and assuming that the real value of the site remains constant over time, it is between US\$2.4 million and \$2.9 million. Dividing this by the average 3000 visitors per year, the site is worth about \$35 per visit.

Figure 1- Visitation Demand and Consumer Surplus



Source: M. Swanson, Timothy and B. Barbier, Edward. Economics for the Wilds: Wildlife, Diversity and Development. Island Press: Washington DC, 1992.

Swanson and Barbier argue that this estimate is undervalued. A major reason is that it only represents the value of the site by national visitors, and the international visitation rate during 1992 was four times larger than the national visitation rate. Further, foreigners should have a higher value for MCRF because they have higher incomes and the lack of nearby substitutes. Finally, “the recreational value of the site does not capture any potential preservation values of the site” (146).

Besides Tobias and Mendelsohn’s studies, Besleme and Aguilar (1994) also used the travel cost method to measure the value of ecotourism in the Carara Biological Reserve. Covering 4,700 hectares and with 26,754 visitors annually, this reserve is one of the largest and most visited of Costa Rican national parks (www.magi.com/crica/info/tico_parks.html, 11/14/97). Their model is different from Tobias and Mendelsohn’s because, instead of using population density and illiteracy rate as the socioeconomic values, they used household density and illiteracy rate.

Everything else in their study follows the same pattern of Tobias and Mendelsohn study. The result is an estimate of the ecotourism value of the reserve. “By observing travel behavior, this study revealed that Costa Ricans are willing to pay \$31 more that they pay per visit to this site, resulting in an annual potential domestic recreational value of \$185,515” (Besleme and Aguilar, 2). However, the demand equation derived in the study has a coefficient of variation, r squared, of 0.27949, which makes the estimate somewhat unreliable.

Other surveys and studies have been done to determine the willingness to pay for Costa Rican ecotourism. Elizabeth Boo’s 1990 surveys “suggest that nature tourists are willing to spend more money than other tourists” (Boo, 36). Also, a Baldares and Laardman study (1990) “revealed that

both Costa Ricans and foreigners agreed that entrance fees to the three most popular national parks (and to Monteverde) should be raised” (Lindbergh and Hawkins, 88). A demand curve analysis estimated that the maximizing entrance fee was US\$1.20.

However, this is a low estimate because the survey had some difficulties: it was done in the low season and its questions were wrongly worded. Lindbergh and Hawkins also describe a 1992 study that ranked Central American parks in terms of quality of the attraction and cost of travel from the United States. It compared Costa Rican prices and ease of viewing wildlife with other ecotourism destinations like Africa. The study estimates that the appropriate fee for a typical Central American park is between US\$5 and \$10 per day.

Two other studies determined the indirect and global value of Costa Rican protected areas. The Costa Rican National Institute of Biodiversity, INBio, is working on the evaluation of Costa Rican genetic resources, too (Swanson and Barbier). The final study will present an extensive database of the Costa Rican native species. Costa Rican genetic resources are raw materials for many pharmaceutical and other products. This database will help identify the real value of these genetic resources by calculating their percentage share on the final value of these products.

The second study, by Kramer and Mercer (1997), used CVM to find the American’s WTP for insuring that a large enough stock of rainforests is protected so that the world keeps receiving its benefits forever. Ninety one percent of the interviewed knew what a rainforest is, and 61% had plans for visiting one. Moreover, “two-thirds of the households indicated that industrialized countries should share the costs of protecting remaining forest” (208). The U.S. public supports international financing of world rainforests, including Costa Rican, and is willing to pay a significant contribution to ensure rain forest protection. “On average, respondents were willing to make a one time payment of approximately \$21-31 per household to protect an additional 5 percent of tropical forests” (196).

Now that the concept of willingness to pay, its valuation methods, and the studies done in the Costa Rica have been explained, let us look at the historic relationship between the entrance fees to Costa Rican private and public natural reserves and the visitation rate by international and national visitors.

9.4 Historic Reaction of Visitors Demand to Entrance Fee Changes

We have learned the difficulties of finding the total economic benefits of Costa Rican protected areas, and the WTP of the visiting Ecotourists. Knowing all these market imperfections, what are Costa Ricans actually charging for their natural environment? The following sections summarizes the historic entrance fees and corresponding visitation rates to all national parks in Costa Rica, and two important private protected areas: Palo Verde Biological Station and Monteverde Cloud Forest Preserve

9.41 National Parks: 1979-1993

Entrance fees to Costa Rican national parks were conservatively managed from 1979 until 1993. There was no price discrimination between international, national, student, and researcher visitors. The fee was held constant from 1979 to 1981 at \$0,23. Then it was lowered for the next two years at \$0,13. It was raised constantly every year after 1983 until 1986. From 1986 to 1989 the fee was held at \$0,44. All visitors paid the same entrance fee for this 15 year period, with the only exception of 1990, when the fee for international visitors was raised to \$1,18, while nationals paid \$, 60. After

1990, fees became equal for all visitors again at \$, 80. The fee was raised again to \$1,57 during 1992 and 1993.

Even though the fees were identical and increasing for all visitors during 14 years of this 15 year period, national and international demand to Costa Rican national parks behaved differently. At the beginning, during 1982, national visitors more than doubled international visitors, but, after 1990, internationals had already outnumbered the national visitors to Costa Rican national parks. Not even the 1990 and 1992 entrance fee increases of around 270% to internationals slowed their increasing demand. Entrance fees of \$1,18 and \$1,57 did not affect foreigners' consumption.

International visitor's demand increased almost exponentially after 1987 from 71,723 visitors to a peak of 404,342 visitors during 1993. Only during 1983 both types of visitors reduced their demand around 5 percent. Economic, political or trend factors could explain this sudden reduction of demand, because it was certainly not a response to price changes. During that year the fee was at its lowest price ever.

Costa Rican visitors' demand during the 15 year period was not as energetic as international visitors' demand. Still, it grew so that national visitors had more than doubled by 1993. Costa Rican's demand for national parks only decreased during 1983, 1989 and 1991 in the fifteen-year period. The 1989 decrease cannot be a reaction to price changes-- just like the 1983 decrease in demand explained above-- because fees remained at its constant level at \$0,44 since 1986. However, the 1991 decrease in their demand could be due to the fee increase to \$0,80 during that year. Moreover, the following year, 1992, seemed a more reasonable year for nationals to decrease their demand due to the 100% increase in the entrance fee price. In contrast, national tourists increased their demand by 44,000 visitors in 1992.

9.42 National Parks: 1994-1996

1994 was a revolutionary year in the public park's entrance fees: international visitors were charged 1000% more at \$15, while Costa Rican nationals were charged 20% less at \$1.27. Suddenly the authorities recognized the willingness to pay of international visitors. International and national demand reacted to the price changes dramatically, too. Foreigners reduced their visitation rate to almost half of what it used to be in 1993 during the following two years, while "the number of 'rich' tourists entering the country rose by 9%" (Aylward, Allen, Echeverría and Tosi, 339).

The 1994 rise in prices of 1000% was done by MINAE without previous consultation to the other two parts of the tripartite commission: ICT and CANATUR. CANATUR was in total disagreement due to the opposition of the tourist operator sector. The fact that the number of tourists visiting National Parks decreased in 1994 for the first time in the last decade increased tension. At the end of 1995 the number of foreign visitors to the National Parks decreased by 33.4% when compared with the end of 1994 (SINAC, 1996). A decision was reached in 1996 to lower the park entrance fee by 50%, which eased some of the tensions between the three parties, to \$6.

This reduction reactivated international visitor's demand to national parks; it started growing again in 1996. National visitors to the parks reduced their demand during 1994, even though their fee was reduced. Only, after 1995 and 1996, when their fee was reduced even more, did nationals' visitation rate started growing again. Today, the past drastic entrance fee changes have made national tourists outnumber international tourists in national parks again.

Besides being an unexpected increase in national parks entrance fees, the 1994 changes are important because they mark the beginning of price differentiation in the national park's fee structure. Since that year, national and international tourists are charged different fees for enjoying Costa Rica's national parks. Differential pricing is common within the tourism industry. Airlines and hotels differentiate their prices to take advantage of the inelasticity of demand of last minute emergency travelers and business travelers. Other ecotourism destinations, like Peru, Ecuador and Kenya, also have higher fee rates for foreign visitors who are willing to pay higher prices than nationals (Lindberg and Hawkins).

However, national parks are not the only important reserves for ecotourists. In Costa Rica, the emphasis on nature tourism by the government has led to the development of a variety of private sector initiatives, such as lodge developments and guide services (Boo). The most interesting of them is the emergence of private protected areas for tourism. "Costa Rica is a [world] leader in having privately owned protected areas"(Dixon and Sherman, 192). Monteverde Cloud Rain Forest (MCRF), La Selva Biological Station, OTS, and Marengo are some of these private natural reserves. They tend to be small, with simple accommodations and managed by highly motivated people. Private reserves generate a lot of income and have higher levels of local participation than other protected areas (Boo) (Dixon and Sherman). What has been their entrance fee structures and visitation rate?

9.43 Private Parks: Palo Verde Biological Station

The Palo Verde Biological Station is one of the four reserves owned and managed by the NGO Organización para Estudios Tropicales (OET). Entrance fees in Palo Verde are differentiated between two groups. A higher tariff is charged to visitors that come for special workshops, seminars and natural history groups. A lower tariff is charged to the resting visitors, including researchers, groups, and others. Still, both fees are much higher than fees charged at national parks. Today, entering the park costs US\$25: four times the price of entering any public park.

However, it is important to notice that the OET does not discriminate its fee prices between foreigners and nationals. The only sudden change occurred during 1993 when the fees were raised 27% to normal visitors and 43% to the special workshops visitors. Normal visitor demand had been increasing constantly since 1991. But in 1993, the new higher fees or other external factors lowered the park's demand.

The external factors must be considered because it was also in 1993 when the national's parks visitation rate declined without any fee changes. A year later, Palo Verde's entrance fees were reduced 16% to normal visitors and 11% to special workshop visitors. This fee change triggered a demand growth of normal visitors from 2418 in 1993 to 3929 in 1995. The demand for special workshops is small and has been decreasing over time: it reduced its market share from being 15% of total visitors to Palo Verde during 1991, to being only 2% during 1996. This reduction of special workshop visitor could be a reaction to the increase in their entrance fee relative to other visitors and parks. Special workshop visitors paid \$10 dollars more than normal tourists to Palo Verde Biological Station in 1991. Today they are paying \$20 more. And, compared with national parks' entrance fee, special workshop visitors' fee is seven times larger.

9.44 Private Parks: Monteverde Cloud Forest Preserve

Monteverde has been a success story in the last twenty years: the visitation rate today is 100 times

larger than during 1974. During the first fifteen years, the number of visitors to the Preserve grew at average growth rates of over 25%. However, from 1989 to 1992, this rate increased to 41%. When the Preserve started, the entrance fee was \$2.30 for all visitors.

Monteverde's fee structure was highly differentiated. During 1995, five different fees were charged (Table 2). Then, the group fee was reduced, and finally today is the same as the foreigners' fee. Elizabeth Boo strongly argued in her 1990 book that Costa Rican natural parks were undervalued, and the entrance fees were insufficient. She claims that "[h]igher entrance fees need to be instituted if parks are to generate their own income and become economically autonomous" (40). The truth is that, even though demand sank, much more income was generated with the 1994 rise on public parks' fees.

The most appropriate method for setting fees will depend on the park's local conditions, and the capacity Costa Rica has to analyze the WTP for its ecotourism (Lindberg and Hawkins). The studies already done in Costa Rica, although somewhat unreliable, give estimates an optimum entrance fee that ranges from \$1.25 to \$31. Still, the responsible decision-makers can evaluate the market and position themselves strategically within the supply of ecotourism destinations. "In Costa Rica, for example, fees charged at the private Monteverde Cloud Forest Reserve could serve as an example for fees at national parks" (88). Even though Monteverde is somewhat different from most of the national parks, the fact that it is charging much higher fees, suggest that Ecotourists are willing to pay that higher fee, and therefore it can be charged at other parks.

No economic activity can exist if it is not profitable, which is why the cost-benefit ratio is essential. The little experience we have in evaluating natural resources has made it very difficult to define the real cost of ecotourism's raw materials: natural and cultural attractions. Information costs puts ecotourism at risk because its raw materials could be undervalued, and therefore on their way to destruction.

10. Economic Implications of Ecotourism in Costa Rica: The Value Chain

10.1 Objective

The main objective of this study is to identify the value chain for ecotourism in Costa Rica. What exactly is the value chain, and why is it important? “The idea of a value chain was first suggested by Michael Porter (1985) to depict how customer value accumulates along a chain of activities that lead to an end product or service” (CMA *et al*, 2). Costa Rica’s ecotourism value chain is a description of the whole ecotourism process, from its raw materials to its final consumption. Costa Rican service providers, by knowing their position within this value chain, can identify the activities that are more or less critical to achieve a competitive advantage.

Ecotourists already pay for all the profit margins along the entire value chain. By doing *vertical linkage analysis*, Costa Rican ecotourism service providers can assess their current competitive advantages and create strategies to maximize the value delivered to customers and minimize their costs. Moreover, it is very important to identify Costa Rica’s ecotourism value chain because the industry’s most important raw material, the environment, is very hard to appraise (see section 9).

Due to market imperfections, prices charged for environmental goods need to be adjusted if their total economic value is to be accounted for. Finding the WTP for these protected areas is a very difficult task. The value chain helps this evaluation by identifying the environmental goods’ percentage share in the final market price of an ecotourism vacation. However, before doing any analysis, the value chain for ecotourism in Costa Rica, with the appropriate costs and revenues assigned to the value adding processes, must be identified.

10.2 Methodology

The identification and estimation of Costa Rica’s ecotourism value chain was carried out in two steps. First, the ecotourism’s industry structure was identified. Second, the costs and revenues of each value-adding process were found and assigned.

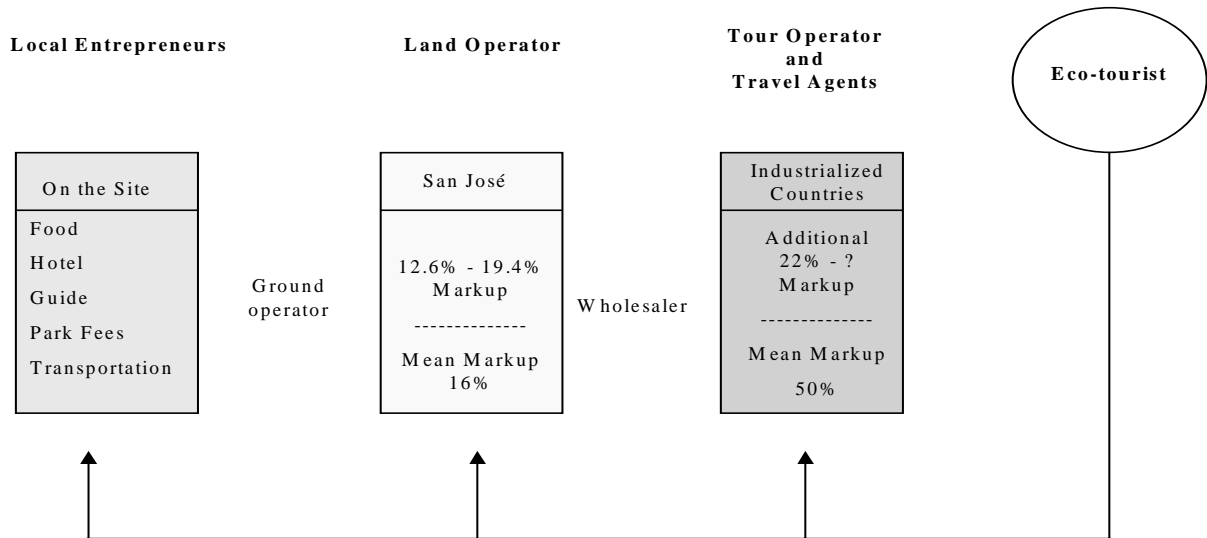
Step 1: The Ecotourism Industry Structure

Figure 2 graphically shows how the ecotourism industry is structured. Ziffer’s 1989 description of the ecotourism industry structure remains valid today (Piza 10/18/97, Lizano 10/22/97). Ecotourists may purchase their vacation in three different outlets: at a travel agency at home, a land operator in Costa Rica, or from the local entrepreneurs at the ecotourism destination. The ground and local operators purchase the ecotourism services from the local entrepreneurs and create complete package tours. These package tours are then bought by wholesalers, tour operators and/or travel agencies located anywhere in the world. As a result, the value adding processes in the ecotourism industry are:

1. *Costa Rican Local Entrepreneurs*- includes all the businesses, governmental Organizations and NGO’s providing goods and services to Ecotourists in Costa Rica
2. *Ground and Land Operators*- located in Costa Rica
3. *Wholesalers, Tour Operators and Travel Agents*- located outside of Costa Rica
4. *Airlines*- providing essential transportation services to International Ecotourists

Figure 2

Costa Rica's Eco-tourism Industry Structure



Step 2: Assigning the Costs and Revenues to the Value Adding Process

After identifying the three main value-adding processes, their corresponding costs and revenues must be found and assigned to create an accurate ecotourism value chain analysis.

Costa Rican Local Entrepreneurs

Costa Rican entrepreneurs provide food, shelter, transportation, recreation, souvenirs and many other goods and services for Ecotourists. These entrepreneurs include hundreds of people, businesses, NGO's and even the government. This study did not measure Costa Rican local entrepreneurs' costs, due to the reluctance of these companies to share this confidential information. However, the study did find the position of Costa Rican ground transportation services, hotels and lodges, restaurants and food providers, protected areas, and guides within the ecotourism value chain.

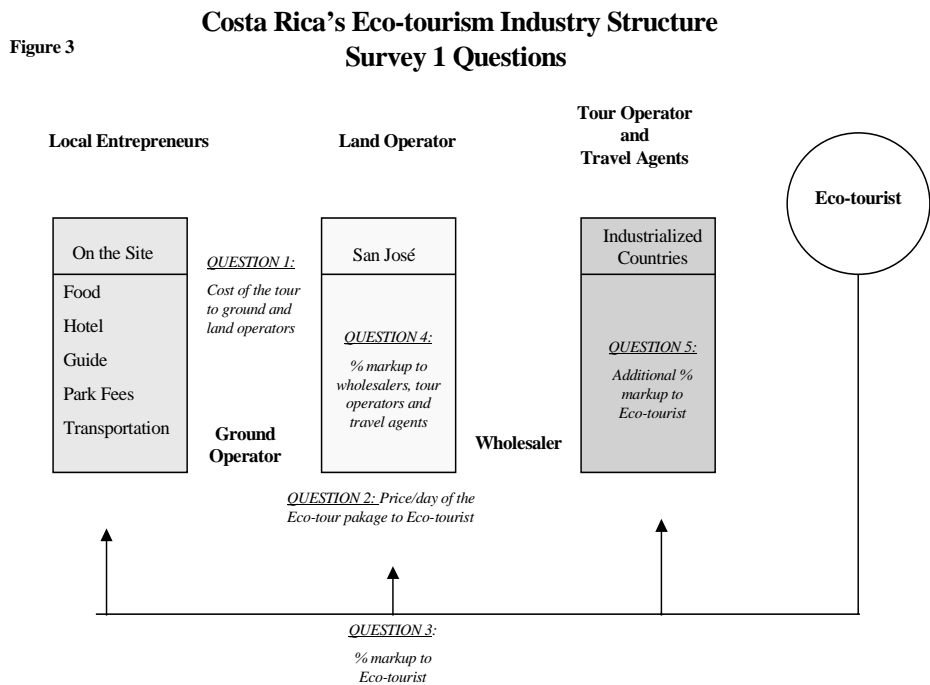
These five sectors were chosen because, as a whole, they cover the minimal expenditures of an ecotourist in Costa Rica. Moreover, most of the ecotourism packages sold by agencies include each of these services (Piza, 10/18/97). A survey asking the percentages that each of these expenses accounted for in the total of an ecotour package revealed the positions. The following is a description of the methodology of the survey.

From the 781,127 tourists that arrived in 1996 to Costa Rica, nearly 65% used a travel agency to plan their trip. Since more than half of the tourists used their services, the study used travel agencies as a

primary source of information. According to the 1996 ICT Statistical Yearbook, there are 168 receptive tourist agencies in Costa Rica. The ICT divided these agencies into groups according to the type of service they provided. One group (group 1) contains the top seven agencies specialized in ecotourism services: they sell the largest variety and quantity of ecotourism packages (ICT, 1997).

A second group (group 2) includes 21 tourism agencies that have in common that 75% or more of their tour packages are ecotourism packages. The third group (group 3) is much larger and includes those agencies that target high-income tourists with environmental interests. According to the ICT, these three groups are the total population of the Costa Rican agencies that specialize in ecotourism.

The study surveyed a sample of these agencies to make inferences about the costs and revenues of the total population of travel agencies that provided ecotourism services. The survey was sent to the 28 agencies of groups 1 and 2, and to 6 more agencies randomly chosen from group 3. Moreover, it was also sent to the Organization for Tropical Studies (OTS) because it controls 80% of the total educational ecotours in Costa Rica. The survey briefly described the characteristics of an ecotour and then asked five questions. Figure 3 shows graphically what the survey asked for.



Note: The 5 questions in Survey 1 relate to tourism packages randomly chosen by respondents

The first question asked the managers for the costs per day of a randomly chosen ecotour package. The study did not ask specifically for a type of ecotourism package related to a segment (i.e. soft, hard, adventure, or specialized ecotourism packages) because the results would have been limited to that segment, and the remaining population of ecotourists would have been omitted from the study. According to Piza, the majority of Costa Rica’s ecotourism is soft ecotourism. However, soft ecotourism is still ecotourism and should not be confused with mass tourism. Soft ecotourists do the same things hard Ecotourists do, they just do them differently. “And the differences in their daily expenditures is insignificant” (Piza, 10/18/97).

The study had a 54% response rate: 19 of the 35 surveys were answered. The data was used in a t-student distribution analysis with infinite population and a 90% of confidence. Although the response rate was relatively high, the total number of responses was low enough that the reader should consider these findings with great caution. That is, this is an exploratory analysis, and we present the findings in a form that most social scientists will recognize—not as a statement of our comfort with making claims with the associated confidence levels. Table 6 shows the results for question 1. It is important to notice that the percentage of each category is not the percentage of the final cost of the ecotourism package, but from the total cost of the ecotourism package to Costa Rican ground or land operators.

Table 6
Total Cost of an Ecotourism Package to Costa Rican Ground and Land Operators
Various Sector’s Percentage Share of the Total Cost

	90% Confidence Interval		Mean
	Transportation	19.20%	32.24%
Hotel or Lodge	20.95%	42.94%	31.94%
Food Providers	17.66%	26.74%	22.22%
Ecotourism Recreation Entrance Fees	4.80%	19.49%	12.15%
Guide	9.44%	18.16%	13.80%
Others	8.84%	28.56%	17.58%
Total Cost of the Package (US\$ /day)	\$79.11	\$140.42	\$109.77

Note: ‘Others’ include administrative and extra costs of the Ecotour

The study tells us, with 90% confidence, that the total cost of an Ecotour package per day will be between \$79.11 and \$140.42, and the mean package cost is \$110 per day. Moreover, the study shows the mean percentage cost --and corresponding percentage intervals-- of each of the sectors that provide services in the package. A Costa Rican tour operator can be 90% confident that a guide for the next ecotour would not cost more than 18% or less than 9.44% of the package’s total cost. The survey revealed each sector’s percentage share of the total ecotour package cost to ground and land operators, and therefore situated these industries within Costa Rica’s ecotourism value chain.

Ground Operators and Land Operators

The remaining questions in the survey asked managers more about the ecotour they randomly chose: (2) what is its price to an ecotourist in Costa Rica (\$/day), (3) the percentage markup to ecotourists in Costa Rica, (4) the percentage markup to wholesalers, tour operators and travel agencies worldwide, and (5) if available, the additional markup the later ones charge ecotourists in developed countries for that same package. The results of the t-student analysis with an infinite population and 90% of confidence are shown in Table 2.

Table 7
Ground and Land Operator’s Percentage Markups of Ecotourism Package Tours

	90 % Confidence Interval		Mean
Price charged to Ecotourist (\$/day)	\$96.90	\$183.64	\$140.27
Markup to Ecotourist (%)	27.25%	41.41%	34.33%
Markup to international wholesalers, tour operators and travel agencies (%)	12.65%	19.35%	16%
International wholesaler, tour operator and travel agents’ additional % markup to Ecotourists	17.18%	26.94%	22.06%

The most important data from table 7 is the percentage markup that ground operators and land operators charge to international wholesalers, tour operators and travel agencies. The study revealed that there is a 90% probability that Costa Rican ground and land operators charge a markup to international agencies that is between 12.65% and 19.35%.

Wholesalers, Tour Operators and Travel Agencies

This study was narrowed to include only the wholesalers, tour operators, and travel agencies from industrialized countries. To find these actor’s position in the value chain, a second survey was sent to forty randomly chosen, tour operators and travel agencies in the United States and Europe. The survey asked two questions: (1) how the company arranges their ecotour packages (through a Costa Rican agency or by company itself), and (2) the final price of a randomly chosen ecotour.

Ten of the forty companies answered the survey (a response rate of 25%). In relation to the first question, 100% of the respondents said their ecotours were arranged by a Costa Rican agency. This confirms that the industry structure follows the design in Figure 1. The second question asked for the final prices they charged for Costa Rican ecotourism packages. The results allow us to infer that there is a 90% probability that the final price per day of an Costa Rican ecotour purchased from a North American or European tour operator or travel agency is between \$174.17 and \$206.811, with a mean of \$190.49.

Table 8
Price of Costa Rican Ecotour Package in Industrialized Countries

90% Confidence Interval		Mean Price
\$174.17	\$206.811	\$190.49

This suggests that an ecotour package with a mean cost of \$110 to a land operator (Table 6), and sold to a wholesaler, tour operator or travel agency with a mean percentage markup of 16% (Table 7) at \$128, is then sold by these agencies to industrialized countries' ecotourists at a mean final price of \$190 (Table 8). According to this, international wholesalers, tour operators and travel agencies together can charge an additional mean markup of 50%.

If this mean final price is realistic, then there is a discrepancy in the information given by the land operators, who said that a mean 22% markup was charged by industrialized countries' wholesalers, tour operators and travel agencies—all together—to the ecotourist. Either they have incorrect information about what the end packager is able to charge as a premium, which would mean that the end packager is reaping greater returns—perhaps at the expense of the land operator who would charge more if he had better information. The other possibility is that the cost and/or markup percentage of the operator is higher than reported.

Airlines

Airlines are major actors in Costa Rica's ecotourism value chain. This study focuses on industrialized country's ecotourists, and this is the only mean of transportation they can use to come to Costa Rica. The airfare's share of the total price of the ecotourism package was found by finding the average cost it has to the average ecotourist. Table 9 shows the number of tourists that came during 1996 from each of the developed countries, and the average cost of their airfare to Costa Rica. These data were used to calculate a weighted average of the airfare cost from developing countries to Costa Rica. The result says the airfare cost from the major industrialized countries is \$775 per trip, or \$95 per day.

The weighted average cost of the airfare per trip was added to the prices international tour operators and travel agencies said they charged for the total land cost to calculate the final total price of these packages. The t-student analysis revealed that, 90% of all the Costa Rican ecotourism packages sold in industrialized countries will have a price within \$265.45 and \$311.33 daily including airfare, and the mean price is \$288. Table 10 shows the results:

Table 9
1996 Arrivals to Costa Rica from Major Developed Countries Through Juan Santamaría International Airport: Corresponding 11/97 Airfare Prices

Country of Origin	Total Tourists	11/97 – Airfare (US\$)
Canada	36,271	628
United States	271,320	637
Europe	129,478	1,049
Japan	5,543	2,134

Sources: ICT, 1997, Olympia Tourist Agency

Table 10
Price of Costa Rican Ecotour Package in Industrialized Countries Including Airfare

90% Confidence Interval		Mean Price
\$265.45	\$311.33	\$288.33

10.3 The Assumptions of the Study

The following list summarizes the assumptions done in the study:

In step 1: The Ecotourism Industry Structure

a. Assumed tour operators and travel agents from the north do not buy their tour packages from Costa Rican ground operators or local entrepreneurs, but only from land operators in Costa Rica.

In step 2: Assigning the Costs and Revenues to the Value Adding Process

- a. Assumed that northern ecotourists used a package tour to plan their vacation. No independent ecotourists were included in the study.
- b. Assumed that northern ecotourists' only expenditure in Costa Rica is an ecotourism package that includes the food, hotel, transportation, entrance fee, guides and extra costs of the land operator. No other expenditure by ecotourists in Costa Rica (souvenirs, extra food or events) was considered in the study.
- c. Assumed the list of 3 groups of agencies given by the ICT formed the total population of providers of ecotourism packages in Costa Rica.
- d. Assumed that all ecotourism packages chosen by the agencies were conducting ecotourism, regardless of being hard, soft, adventure or educational ecotourism.
- e. Assumed that all agencies were honest.
- f. Assumed that northern ecotourists can only reach Costa Rica by airplane.
- g. Assumed that northern ecotourists purchased airplane tickets at a travel agency on November of 1997. Discount tickets or charter airplane tickets were not included in the study.

10.4 The Value Chain for Ecotourism in Costa Rica

The previous section identified Costa Rica's ecotourism value chain. Figures 4 and 5 are the recompilation of all the average information gathered in the study. Figure 4 suggests that on average an ecotourist coming from an industrialized country to Costa Rica pays \$288 a day. Of this \$95 go to the airline, \$65 to the foreign wholesalers, tour operators and travel agencies, \$18 to the Costa Rican land operator, and \$110 to Costa Rican local entrepreneurs. Of these \$110 spent locally, on average, \$23 goes to all the ground transportation related businesses, \$28 goes to all the hotel related businesses, \$20 to the food providing businesses, \$11 to the protected areas as entrance fees, \$12 to the guide, and \$16 to the land operator's management, administration and extra costs.

Figure 4

Value Added to Costa Rica's Eco-tourism

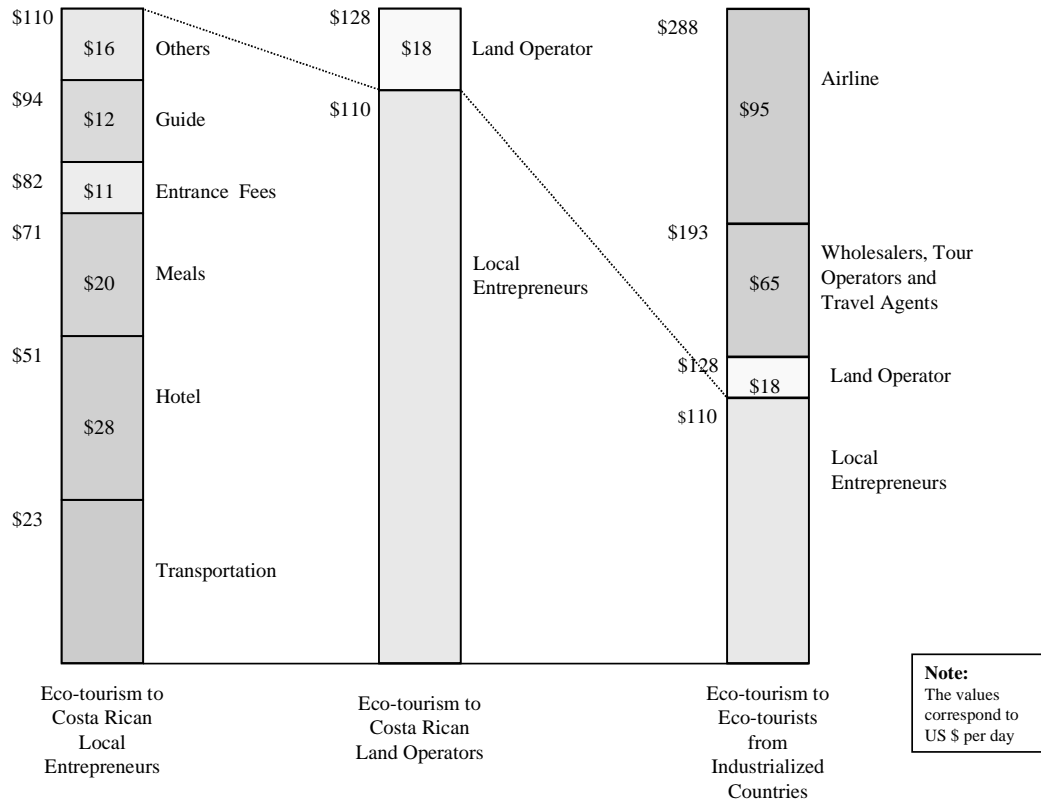
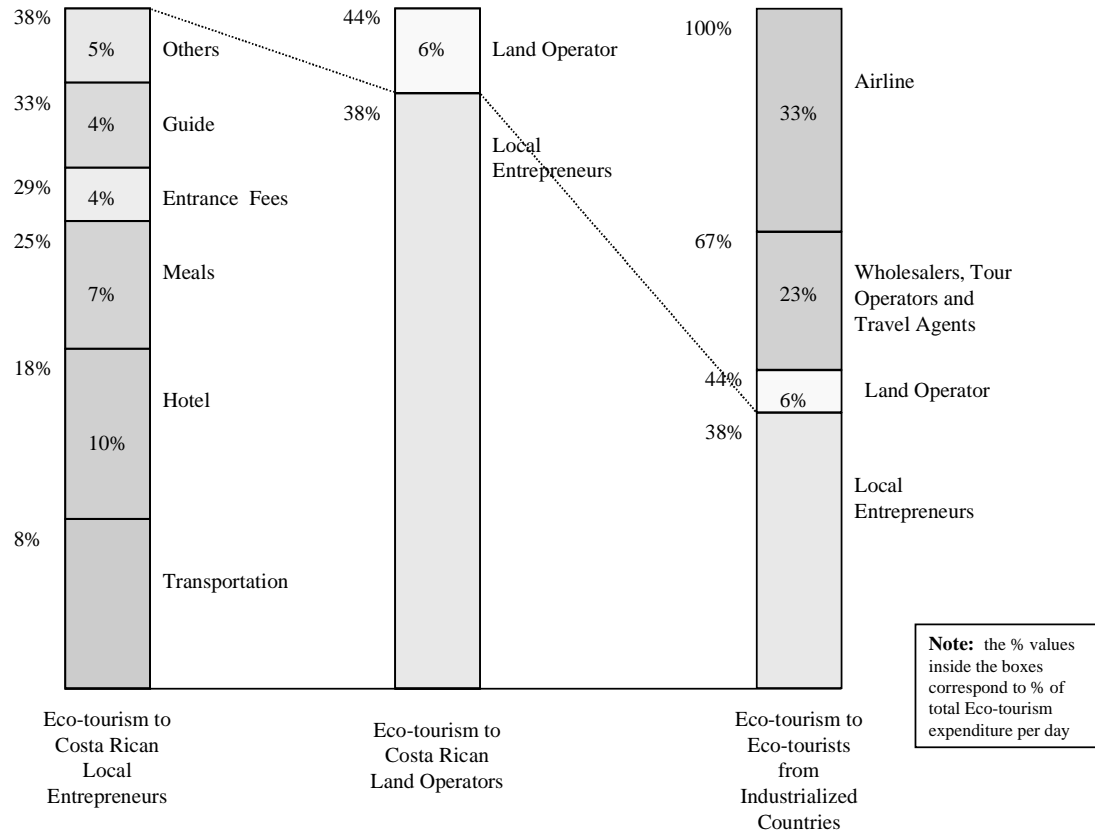


Figure 5 shows the same information, but in percentages. On average, Costa Rican entrepreneurs absorb the largest percentage of the ecotourist expenditure (38%), followed by the airline's capture of 33%. In spite of that, 56% of the total Ecotourist expenditure in Costa Rica is absorbed by internationals, and 44% from nationals. However, this study does not estimate the extra expenditures Ecotourists may undertake in Costa Rica --souvenirs, tips, extra meals, telephone calls, etc. These additional expenditures, if accounted for, might bring the percentages into parity.

Figure 5

Value Added to Costa Rica's Eco-tourism



Before analyzing Costa Rica's ecotourism value chain more in depth, it is important to consider some of the strengths and weaknesses of this type of study. The costs and revenues used in its elaboration are for one period only. Long-term changes in cost structures, investments, inflation, violence in Central America, a war with Iraq-- almost any economic change in the world can make today's current data to be outdated by next period. These results must be interpreted with care not to project today's ecotourism value chain onto the expected behavior of tomorrow's ecotourist, or tomorrow's ecotourism industry.

11. Conclusions: International and National Rent Capture from Costa Rica's Ecotourism

Tourism is a widely praised industry because of the rapid development --through job creation, technology transfer, investments, and others-- it can bring to remote underdeveloped communities. As mentioned earlier, it has been even considered by worldwide organizations as the industry that will lead the world into sustainable development. Nevertheless, tourism, especially mass tourism, involves much leakage due to the large expenditures on imports and foreign operators' repatriation of profits.

Strasdas (1994) states that only one third of revenues from mass tourism stays in the country of destination, the other two thirds go to airlines and tour operators. From this one third, however, only a small amount is for local people and conservationists; most of it goes to the capital of the country. From our value chain analysis, we found that 44% of the ecotourist's expenditure is spent in Costa Rica. Of that 44%, how much leaks out of the economy due to imports and foreign investment is related to four factors:

- (1) The total 56% captured by the airline, wholesalers, tour operators and travel agencies leave the country
- (2) The total 19% captured by the guide, the entrance fees, the land operator and its administrative and extra expenses (i.e. others) stay in Costa Rica
- (3) Costa Rican hotels and food producers capture almost all of their share, but a small percentage that leaks due to food imports and other imports. 80% of Costa Rican hotels have less than 40 rooms and are owned by Costa Rican residents that re-spend their money locally and pay taxes.
- (4) Costa Rican transportation sector captures the least percentage of the sectors because all the cars and buses it uses are imported to Costa Rica, plus the gasoline they use.

Table 11 estimates, based on these assumptions, of the national and international percentage rent capture of these goods and service. The final result, 37% of national rent capture, is not a low percentage, considering that there are no Costa Rican airlines that could compete for the 33% of the share captured by international airlines.

Table 11
Estimation of National and International Rent Capture of Costa Rica's Ecotourism Revenues

activity	Rent Capture	
	national	international
guide	4%	
others	5%	
entrances	4%	
land operator	6%	
meal	6%	1%
hotel	8%	2%
transportation	4%	4%
wholesalers, t.o, t.a		23%
airlines		33%
TOTAL	37%	63%

We concur with Lindbergh and Hawkins that if Costa Rica wants to increase its national rent capture by reducing leakage, the following recommendations may help:

1. Create employment in the ecotourism industry by training and forming skilled individuals that could become guides and managers.
2. Ecotourists want to use existing local modes of transportation- whenever possible, use local boats, canoes, mules, or taxis.
3. Improve the linkages with agriculture and fishing- Ecotourists tend to be interested in local cuisine
4. New Eco- tourism constructions should be small scale and in remote locations, with the use of local labor and materials.
5. Develop local handicrafts and other souvenirs (107)

The next logical step in this research agenda, now that some approximation has been made about the value chain for ecotourism in Costa Rica, is to examine the value chain for mass tourism in the same country. There is a tendency for this country right now to move away from its roots in nature-based tourism, towards mass or non-nature-based tourism (beachfront, golf, etc.). Before this tendency gains much more momentum, it would be valuable to know which form of tourism is more appropriate for the long-term sustainable development of the country.

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Table 1
**Total National and International Visitors to Costa Rican National Parks and
 Corresponding Entrance Fees
 1979-1996**

YEAR	TOTAL VISITORS	National Tourists	Fee \$	International Tourists	Fee \$
1979	Nd	Nd	,23	Nd	,23
1980	Nd	Nd	,23	Nd	,23
1981	Nd	Nd	,23	Nd	,23
1982	205,640	140,262	,13	65,378	,13
1983	194,402	134,136	,13	60,266	,13
1984	234,063	170,101	,21	63,962	,21
1985	245,662	182,161	,39	63,501	,39
1986	261,967	191,911	,44	70,056	,44
1987	287,047	215,324	,44	71,723	,44
1988	360,222	235,512	,44	124,710	,44
1989	394,742	228,206	,44	166,536	,44
1990	453,033	240,036	,60	212,997	1,18
1991	496,406	222,975	,80	273,431	,80
1992	605,287	283,126	1,57	322,161	1,57
1993	772,025	367,683	1,57	404,342	1,57
1994	700,434	322,148	1,27	378,286	15,10
1995	634,835	362,341	1,12	251,740	15,10,7, 5,29
1996	658,657	389,883	,98	268,774	6

Source: **Bermúdez, Fernando. 1996 MINAE**