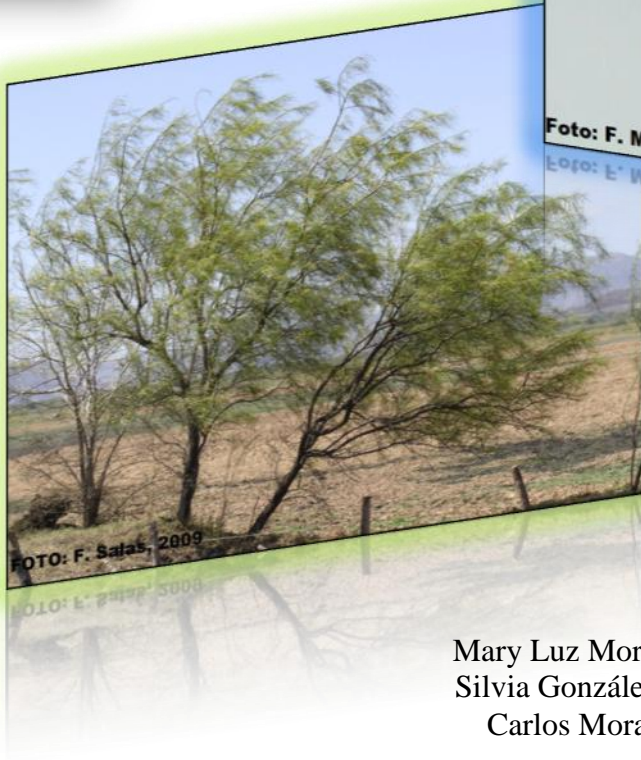




# Analysis of the Socio-economic Contributions of PALO VERDE NATIONAL PARK “A nest for Research and Education”<sup>1</sup> 2009



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## **List of Acronyms**

ACAT	Arenal-Tempisque Conservation Area
ACG	Guanacaste Conservation Area
CRUSA	Costa Rica-United States Foundation (by its acronyms in English)
CSIC	Superior Council of Scientific Researches of Spain
INBio	Biodiversity National Institute
ICT	Tourism Costa Rican Institute
IRES	Research and School Renewal
NSF	National Science Foundation
OET	Organization for Tropical Studies
ONG	Non-Governmental Organization
PNPV	Palo Verde National Park
PNRB	National Parks and Biological Reserves
PSA	Payment for Environmental Services
SINAC	National System of Conservation Areas

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## **1. EXECUTIVE SUMMARY**

The Project ‘‘**Systematization and Analysis of the Contributions of National Parks and Biological Reserves to the Economic and Social Development in Costa Rica, Benin and Bhutan**’’ was developed by CINPE and executed under the Program of South-South Cooperation (financed by the Kingdom of the Netherlands and administrated by Fundecooperación), from which this case study is integral part.

This project was developed in three countries and it was led by the International Centre for Policy for Sustainable Development (CINPE) of the Universidad Nacional (UNA) of Costa Rica. The counterpart in Benin is the Centre Béninois pour l'Environnement et le Développement Economique et Social (CEBEDES). While in Bhutan is the Division of Nature Conservation of the Ministry of Agriculture and Forests of the Royal Government of Bhutan.

The project's general objective is to systematize and analyze the socio-economic contribution – decentralized and centralized - "of national parks and biological reserves to the economic and social development of Costa Rica, Bhutan and Benin and make policy recommendations of management to support policy makers in the management of national parks and biological reserves.

Palo Verde National Park (PNPV), declared wetland of international significance in 1991 (ramsar site), it is one of the three case studies analyzed in Costa Rica. This one was selected by a group of experts to accomplish several criteria, which place it as a Protected Wildlife Area, important for the protection of unique ecosystems and diversity of landscapes. This PN is also distinguished by research and education generated on it. A great number of scientists, academicians, and students come to Costa Rica in order to visit the park.

The methodology used in the study combines the cluster analysis with a dynamics of added value chain, where PNPV constitutes the material basis that underpins the existence and reproduction of diverse socio-economic activities that depend directly and indirectly on their preservation. These activities report qualitative and quantitative contributions to various social actors at local, regional, national and international levels.

In an effort to become these contributions in monetary terms, the search, systematization and analysis of primary and secondary information allows an approximate estimation of the contributions of PNRV for 2009. In this regard, the global contribution of this area amounts approximately to **¢1.106.217.230 (US\$1.936.446.4)**. From this total, around 29,53% remains at local level, 1,58% at regional level, 61,41% at national level and 7, 48% at international level.

## **2. INTRODUCTION AND ANTECEDENTS**

In Costa Rica, National Parks and Biological Reserves (PNRB) constitute nearly the half of (12, 74%) of the land covered by the Protected Wildlife Areas (ASP) in the country (26, 53%), whose main goal is to promote the conservation in favor of biodiversity. Conservation can be considered inseparable from the development processes in a society committed to the diverse ecosystems and natural resources, as is the case of Costa Rica. The way they interact dynamically the conservation and development at different spatial scales is the primary objective of this study.

The fundamental questions of research are. Do PNRB meet any other additional duty for the protection of environmental and natural resources? If that is the case, what is the additional meaning of these PNRB and for whom? The hypothesis associated with the previous questions is that PNRB produce additional benefits to their primary role, which is the conservation of natural and environmental resources. These additional benefits are enjoyed by different social actors. In fact, this study is focused on the calculation of these benefits generated by PNPV that was one of the studies selected by a group of key actors.

The general objective of this project and document is the one of estimating and systematizing the additional contributions (economic and social ones) of National Parks and Biological Reserves to the socio-economic development in Costa Rica.

The objectives of this study are the following:

- To identify the cluster generated around PNPV
- To systematize and analyze the quantitative and qualitative contribution of PNPV at international, national, regional and local level.
- To make recommendations of policy to an integrative approach for conservation and development of PNPV.

It is worth mentioning that this study does not pretend to carry out an analysis of the benefit of PNPV in relation to the cost of maintenance of this park; that is, a kind of cost-benefit analysis. What is pretended to estimate are the total incomes generated by directly and indirectly activities linked to PNPV and its distribution at the local, regional and national level.

It is important to note that this study does not pretend to make an approximation about the total economic value of PNPV, due to this implies identification not only of values of direct and indirect usage, but also non-usage values, in both cases with serious limitations and restrictions in relation to the methods and available approaches. That is why in this sense is looked for systematizing the socio-economic contribution linked to activities that are developed around the PNPV and that trade their products in the market.

The project is developed in parallel in two countries, one of them in the African Continent, Benin; and the other in the Asian Continent, Bhutan. The purpose is to apply and adapt the methodology developed in Costa Rica to the conservation areas of both countries. For its part, in Costa Rica at the same time of this research are carried out two additional case studies, one in Corcovado National Park – Caño Island Biological Reserve (Otoya, M. et al 2010) and the other one in Rincon de la Vieja National Park (Salas, M. et al 2010). Additional to these case studies was developed the study of the Contributions of National Parks and Biological Reserves at national level (Moreno, M. et al 2010 a).

To achieve this objective proposed in this document, this one has been structured into 9 sections. In the third one is presented the general methodology used for research. In the fourth section the general information about Palo Verde National Park, is presented in a way that allows contextualizing the reader in time and space, as well as a detailed description of PNPV and the binding socio-economic dynamics.

A cluster analysis is presented in the fifth section, which includes an identification, classification and analysis of the activities that are carried out around the PNPV and that take advantage of their existence in a direct and indirect way. The sixth section presents the results as result of research, where are estimated the economic contributions obtained from the existence of PNPV for the year 2009, which are presented per activity and according to its contribution to local, regional, national and international development. The seventh section refers to an analysis of strengths, opportunities, weaknesses and threats; taking the eighth and ninth section for the policies related to the management of the park; and the summary and conclusions.

### **3. GENERAL METHODOLOGY<sup>2</sup>**

National Parks and Biological Reserves (PNRB) are natural assets that –in socio-economic terms- generate a phenomenon that in the development analysis is called *externality*.<sup>3</sup> In the case of the PNRB, such external effect (on the local, national and international society), induced by a territorially conglomerate set of ecological services, has mainly a positive sign, since a cluster of socio-economic activities (provision of goods and services of productive, recreational nature, etc.) takes into account these services in the surroundings of the park or reserve<sup>4</sup>. These services are also taken into account by a chain related to

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<sup>2</sup> This methodological section is based on the first version of the project and that is found in Furst, et al, 2005.

<sup>3</sup> See for more details: Salazar-Xirinachs (1996), and Scitowsky (1973).

<sup>4</sup> It is clear that an externality attributed to the initial induction of a sequential process of development is different from the externality that is recognized and evaluated in the impact analysis and environmental cost (Pearce and Turner, 1995). In contrast to the second one (reduced to the encumbrance of usefulness due to an environmental damage), the first one is equivalent to a wide range of indirect effects of chaining and connection (from the point of view of structural change in the pattern of socio-economic development) that at first sight are concentrated in an area around the PNRB (the so-called area of influence). Such boost of development also covers the emergence of service activities and production in geographical areas beyond the direct area of influence. It involves territorial units in the chain of effects produced by PNRB, including



related activities in higher scales at the local one due to the emergence of subsequent impacts of socio-economic activity at micro regional, regional, national and international level. So, we can talk about a positive socially externality due to the existence of PNRB, potentially leading to a process of vertical and horizontally linked development.

The cluster approach (or clusters of interrelated activities within a chain of income generation) is identified as a suitable tool for the identification of productive activities (including research projects in or related to parks and reserves) and social ones (including the recreation of different levels and qualifications). This allows attributing the contributions of PNRB to the emergence and consolidation of such socio-economic activities in order to estimate through both numerical calculations and through qualitative indications, the benefits in terms of employment, compensation, income visitation, value added created locally and nationally, payment of royalties in the quality of applied scientific research in parks, etc.

The instrument that is perceived as conceptually and operationally as the more useful for the type of analysis outlined above, then it constitutes the combination of local cluster analysis and transverse chain (that is, from the village of origin to final destination). With this, you can drag multiple forward linkage effects, which have the PNRB on socio-economic life, from its source (location) to its impact still barely identifiable (accountable) to a higher level of spatial scale, even when there is a greater emphasis on the contribution to local development.

In the analysis of the socio-economic development, the above is known as *cluster* linked to a dynamics of added value chain<sup>5</sup>. For this particular study, the *cluster* must be understood methodologically as a reactive process to destabilizing initial boost of “*status quo*”. This is equal to a sectoral and spatial concentration of activities and enterprises that increasingly interact with each other in terms of production and organization and ultimately depend on the conservation or not of the PNRB. So, this approach involves the concept of *unequal development* of Hirschman (1973), which postulates the start of a socio-economic dynamics in the form of a *set of chain-cluster* increasingly linked from a social investment of innovative nature in a development potential.<sup>6</sup> Such potential or development center is given in our case for public investment in conservation of the PNRB.

This clearly sets out an enormous methodological difficulty to identify and define, in socio-geographical terms and chain analysis (economically and territorially chained links), the

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micro-region, region, country and global environment that range from the regional to the global at the international scale.

<sup>5</sup> See Porter, (1990, 1999), Altenburg / Meyer.Stahmer (1999); and Ramos, (1999).

<sup>6</sup> This *cluster concept* is quite different from that of Porter (1990, 1999) and others (INCAE, 1999) that reduce the boost to the vertically and horizontally formation (geographically) integrated of the conglomerate to the favorable synergistic effect on the global competitiveness and efficiency of cooperation on a network. Examples are the famous industrial districts in Europe (Schmitz / Musyck (1993) as well as in developing countries the new eco-tourist clusters around natural resources such as protected wildlife areas (e.g. for Costa Rica, in: Inman, et al. 1998, or more specifically to Monteverde, in: Acuña / Villalobos / Ruiz, 2000).

various facets of impact induced in scales of spatial impacts indicated. In particular, this is valid for the observable overlap among the spatial and territorial scales and the resulting problem of attributing and accounting for socio-economic benefits to the geographic units positively affected by the existence and preservation of PNRB.

Additionally, the "double counting" of benefits associated with activities developed within the chains should be avoided, in order to generate the most accurate quantification. So, the analysis should note qualitatively the way each chain is organized and clearly separate what benefits are generated from the existence of PNRB and which ones not. These limitations are taken into account in this study at the time of describing and quantifying the contributions of the PNRB.

The *Cluster analysis* -in close connection with the *evaluation of chains*-constitutes the most appropriate methodology to address the *societal externality* that characterizes protected areas from the perspective of development dynamized by innovations. In this case, the original innovation (initial boost force) is interpreted as the decision made (by the Costa Rican society) to conserve the ecological services of the park, and the externality generated by such an innovation that is seen as the use of new opportunities in socio-economic fields that are induced or at least related to the existence of the park or reserve (Hirschman, 1973). In annexes 1 and 2 are specified the activities and instruments that were used in this case study.

#### **4. GENERAL INFORMATION OF THE STUDY CASE**

Palo Verde National Park was part of Rancho Colmeco since 1923. The Palo Verde lagoon and its surrounding areas were declared Wildlife Refuge in 1977 and it was called Dr. Rafael Lucas Rodríguez. In 1978, a sector known as Catalina was declared Palo Verde National Park and this one merged with Dr. Rafael Lucas Rodríguez Refuge, given as result what we know today as Palo Verde National Park. Palo Verde National Park was created according to decree number. 20082-MIRENEM from December 10<sup>th</sup>, 1990 (ACAT, 2009).

This Park has an extension of 19,800 hectares (198 km<sup>2</sup>)<sup>7</sup> and its maximum elevation is of 268 meters m.s.n.m in the Pelón hill located in the Catalina sector (ACAT, 2009). From this extension approximately 60% (11.050 hectares.) correspond to wetlands (Castillo and Guzmán, 2004).

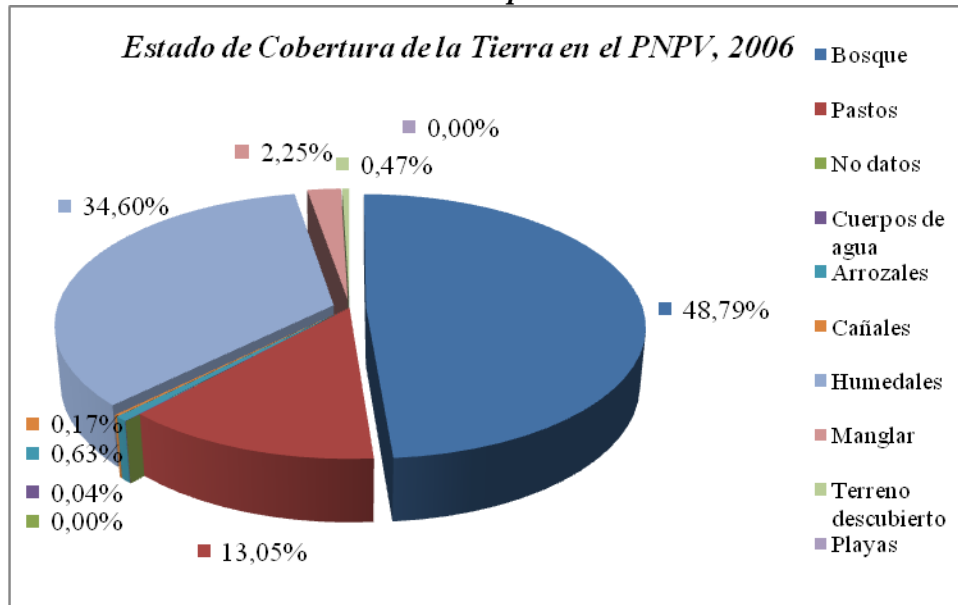
INBIO (2009) provides other kind of information about the usage of the land in and around the PNPV, as described in graph 1, the coverage of land in PNPV is associated with forests in a 48.79%. The forest species are mainly native, which include the tree of Guanacaste (*enterolobium cyclocarpum*) –national tree of Costa Rica-, Madero Negro (*Gliricidia*

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<sup>7</sup> In terms of the extension of PNPV, several amounts of hectares are found available. In this regard, in the introduction is mentioned the figure provided by SINAC, that is, 18 418 hectares. However, graph 1 of the section 1.2 uses the data from INBIO, which add up a total of 18 214 hectares. As extension of PNPV.

*sepium*), Ojoche (*Brosimum alicastrum*), Cenízaro (*Pithecolobium saman*), Tempisque (*Mastichodendron capiri*), Guácimo Blanco (*Goethalsia meiantha*), Mango (*Mangifera indica*), Jocote (*Spondias purpurea* L), Indio Desnudo (*Bursera simoruba*), Pochote (*Bombacopsis quinata*), and Níspero (*Eriobothrya japonica*).

**Graph 1**



**Source:** Own elaboration with data provided by Chacón (2009).

Grasslands cover 13, 05% of PNPV, while water bodies add up 0, 04%, rice fields 0, 63%, reedbeds 0, 17%, mangroves 2, 25% and open land 0, 47%.

For its part, the wetlands represent 34, 60% of the land coverage; inside the PNPV, these ecosystems are valuable in terms of biodiversity (see chart 1).



**Photo 1:** Lagoons of PNPV

#### 4.1. Geographical location of Palo Verde National Park

The PNPV is located in Guanacaste Province between the Bebedero River and the Tempisque River 20 km southwest of the city of Bagaces (Map 1). The communities located around the PNPV are Bagaces, Puerto Humo, Bagatzí, Playitas and Falconiana.

The move to the PNPV entails traveling on the North Interamerican Highway, leaving from San Jose and advancing up to Bagaces. This trip takes about 4 hours and 30 minutes.

Map 1. Geographical Location PNPV



Source: [www.costaricalink.com](http://www.costaricalink.com)

#### 4.2. Importance of Palo Verde National Park

Palo Verde National Park (PNPV) is part of one of 28 national parks in Costa Rica, administrated by the National System of Conservation Areas. At national and international levels, this park is widely known both for its wetlands and for the rich biodiversity it contains. The singular name of PNPV is due to a tree known as Palo Verde (*Parkinsonia aculeata*), which is a shrub with leaves, branches and trunk parts in light green that grows in swamps and it belongs to the Fabaceae family and the caesalpinaceae subfamily (Chavarria, personal communication, 2009).



FOTO: U. Chavarria, 2009

Photo 2: PNPV during the dry season

This National Park is one of the places of greatest ecological diversity of the country, with more than 12 different habitats. Among them are found the lagoons and brackish and fresh water swamps, grazings with salty mangrove, the mangroves, the grasslands with raspaguacal, the stocky forests of lowness, deciduous mixed forests of plain, mixed forests upon lime hills, riverside forests or of gallery, wooded savannas, waterlogged forests and evergreen forests. Besides, it is a place of large concentrations of aquatic birds and vadeadores (see box 1), (ICT, 2009). Besides of the 6 species of mangrove that are found in Costa Rica, 5 of them are in Palo Verde National Park (ACAT, 2009).

The main life zone of PNPV is the tropical dry forest. It is of the last three remaining of tropical dry forest in Middle America (SINAC, 2009). The tropical dry forest presents a dry season with an average duration from 5 to 6 months, usually from mid-December to mid-May (ACAT, 2009). During this season, many trees lose their leaves and the lagoons of PNPV dry and just keep some bodies of water.



*Photo 3:* PNPV during the rainy season

**BOX 1**  
**GENERALITIES OF PNPV**

**Access:**

30 km West from Cañas,  
Guanacaste

**Extension:** 19 800 hectares

**Attractions of PNPV:**

- 1.** Important freshwater seasonal wetlands, habitats that are home to over 75 species of mammals and over 700 plants, including about 100 species of aquatic plants.
- 2.** Observation of about 280 species of birds including 60 species of waterfowl, 55 species of reptiles and amphibians.
- 3.** Area of swamps and limestone hills that make this area a diverse matrix of habitats.
- 4.** The maximum elevation is of 268 m.s.n.m. in the Pelón hill located in the Catalina sector.

**Source:** ICT (2009), SINAC (2009), and ACAT (2009)

When the dry season ends, the color of the forests turns green and the trees regain their leaves. For its part, lagoons re-establish and begin to flood the bodies of water. This is due to the impact of rains, which allows the change of the landscape in PNPV.

Since 1991 PNPV is a Ramsar Site of international importance, which has allowed the intervention of wetlands and the opening of more than 500 hectares of lagoon, the count of the concentration of birds were of 20.000 individuals. (SINAC, 2009)





*Photo 4:* PNPV

There are endangered species such as Jabirú or Galán sin Ventura (*jabiru mycteria*) the biggest water bird of the continent, many trees such as Guayacán Real, Cocobolo, and Ron Ron. Besides, the Park is made up of a set of different flooding habitats of plains, delimited by rivers and a row of calcareous hills. The area is subject to seasonal floods of great magnitude. During the rainy season and due to poor natural drainage that the plain

has, the area is flooded by the combined effect of the rain, tides, and floods along the Tempisque and Bebedero Rivers. Sometimes, the whole zone becomes a vast lagoon due to the floods caused by heavy rains (Chavarria, personal communication, 2009).

Geomorphologically, PNPV consists of two units: the plains and mountains of low elevation. Besides, the park is surrounded by a ring of wetland, as well as pens and old buildings, which reflect the life of the savanna man and they constitute a very important element in the cultural heritage of the old Guanacaste (SINAC, 2009).

PNPV is visited annually by a big number of scientists and students who analyze the worthy biodiversity of its habitats, and especially the richness of birds in the place. The Organization of Tropical Studies (OET) has a Biological Station inside the Park, where take place several projects of research and environmental education.

#### 4.3. Management and Administration of PNPV

According to the draft of the Management Plan of PNPV in 2008, the objectives of this are: (see box 2):

**A-** To protect and conserve ecosystems, biodiversity, abiotic and cultural resources, in order to assure the continuity of evolutionary processes, migration of birds, natural dynamics, historical and cultural aspects.

#### **BOX 2 OBJECTIVES OF PNPV**

##### **Objectives of the management of PNPV:**

- 1.** To develop management activities for restoration and protection.
- 2.** To promote and facilitate and encourage scientific research and the integration of the local, national and international community, in the usage and management of the area.
- 3.** To administrate and generate the proper financial resources.

**Source:** Management Plan, 2008.

**B-** To promote and facilitate the scientific research, monitoring of species, ecosystems and abiotic resources to develop a basis of adequate scientific and technical information for the management of social and ecological characteristics of the Park and the environment around it.

**C-** To provide and improve the physical and technical infrastructure necessary for the enjoyment, education, knowledge and usage without destruction of biodiversity and ecosystems, by local, national, and international community.

**D-** To establish mechanisms that allow the area to become a generating instrument of economic and environmental benefits according to the mission established and that contribute to the improvement of life quality of surrounding communities.

**E-** To provide the officials with basic conditions of infrastructure, equipment, materials and adequate training, in order to improve their life condition, to provide an efficient quality in the performance of their tasks and in the contribution of services.

#### 4.4. Administration of Palo Verde National Park

The administration of PNPV is in charge of SINAC. This park is part of the Arenal-Tempisque Conservation Area (ACA-T) whose administrative office is located in Tilarán (Guanacaste). ACA-T is one of the eleven areas that make up SINAC, under the direction of the Minister of Environment and Energy. This area was constituted on October, 1991 and it covers approximately 387.515.47 hectares, which is equivalent to 7.58% of the national territory.

Politically it covers part of 11 cantons and 28 districts of the provinces of Guanacaste, Alajuela and Puntarenas. From the whole territorial extension of the area; currently 25.31 % are constituted by protected wildlife areas and 74.69 % correspond to the influence area (ACA-T, 2009). ACA-T has 10 more Protected Wildlife Areas among them: Biological Reserves, Protected Zones, Natural Reserves and Wetlands.

PNP is administrated by 18 people in total, among them 6 technicians, 6 rangers and 6 people with other special fields.

An official entrance has been established by the administration of the park for the visitor's entrance. Los Negritos Post has the presence of a ranger in charge of collection the tickets.

In terms of opening hours to the public, PNPV remains open from Monday to Sunday from 7:00 a.m. to 12:00 p.m. and from 1:00 p.m. to 3:00 p.m. The collection in the quality of admission to PNPV is of ¢1000 colones for national tourists and US\$10 for the case of foreigners. Each person who wants to camp must pay US\$2 dollars/night for such service.

The administrative office of SINAC in the park, received in 2009 an Operational budget from the Government of ¢144.543.520 to cover the salaries of 18 employees who work on the management of the Park. The Government covered also investments by an amount of ¢10.000.000 for that year. Besides of the previous, were generated ¢36.000.000 in funds for Active Management and Shelter that are deposited in the Foundation for the Development of the Arenal Conservation Area and are used to cover own expenses of the management of the Park (Mora, M and Aguilar, M. 2010).

Visitors have at their disposal various activities. Those interested in research and education on environmental issues has the option of day and night walks, bird watching, trails, observations of amphibians and reptiles, as well as a tour by boat on the Tempisque River.

#### 4.5. Main Socio-economic Activities

In PNV are developed especially activities of research, education and tourism. Around these activities, hotels, restaurants, tour operators, boatmen, travel agencies and airlines generate economic resources. Besides, are also identified funds for research, which in their majority are managed by the Organization of Tropical Studies (OET), which is located inside the Park and that are not related directly to the administration of the Park by SINAC.

**BOX 3**

**ADMISSION AND LODGING**

**Ticket price:**

- Foreigners: \$10.
- National Adults: ¢1.000
- National children and residents of 6-12 years old: ¢400

**Lodging:**

- Right to camping: US\$2

**Source:** Fielwork



## **5. CLUSTER ANALYSIS AROUND THE PNPV**

Following the methodology of cluster, the PNPV case study provides an analysis of socio-economic contributions based on this methodology, at local (communities of Falconiana, Bagatzi, Bagaces, Bolsón and Puerto Humo) regional (Cañas and Liberia) national and international level. Based on this approach are identified different conglomerate productive activities and related to PNPV, especially research, which includes its related activities and tourism, (in turn dependent on the environmental services that come from the park or their surroundings, for example: scenic beauty and existence of wetlands).

The existence of a Biological Station of the Organization for Tropical Studies (OET) inside the PNPV, it sets out important chains identified as part of the socio-economic conglomerate associated with the park. This category includes research, education, leisure time and spiritual experience. All these activities are directly related to conservation and management of PNPV under the administration of SINAC.

The core activity in which are based all the activities developed around the park, is the one of conservation and natural protection by the State. This activity is related to the positive *externality* provided by the natural heritage of PNPV and its ecological services, allowing the existence of other chained effects on development. For example, research and education, economic activities, as well as leisure time and spiritual experience.

The interactions among the various productive, commercial and recreational activities have interesting feedbacks with the central axis of the cluster formation, that is, the activity of conservation and protection of PNPV. Thus, research and education, park management by SINAC, as well as related activities are largely determined by the existence of the park.

At the same time these activities provide resources in the form of incomes from funds for research, accommodation, entrance fees or transfers to SINAC and OET. Indirectly, these activities generate contributions to local development through investments in infrastructure and services that enable greater visitation to the park and, hence, the zone of influence.

Various interactions take place internally in the cluster. The existence of this park makes possible the protection of ecosystems and natural resources. They constitute the material basis for the development of various socio-economic activities. Socio-economic activities involve flows of productive inputs, which in turn result in the movement of money measured in monetary units. Additionally, the existence of the park makes possible the generation of more qualitative services that relate to the welfare of human populations, that is, not measurable in monetary measures, for example, leisure time and information, which are received both by nearby communities and national and foreign visitors. This implies an improvement in the welfare of these people because it involves a higher quality of life.

Figure 1 shows the cluster of development around the PNPV. In this regard, protection and conservation of ecosystems and natural resources of the park constitute the center or dynamic pole of the cluster. This one is composed of 4 main axes:

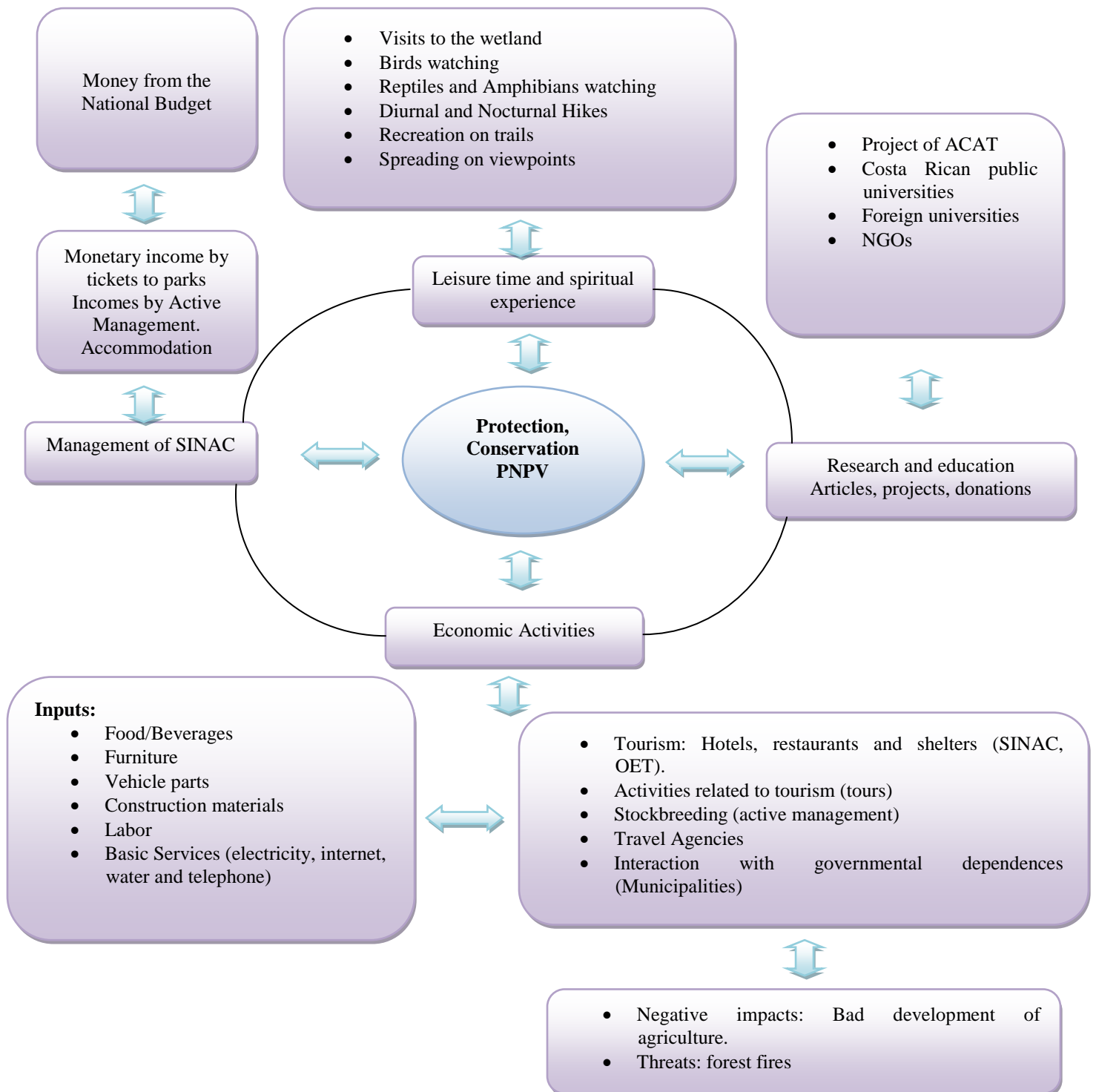
- Management (visitation and maintenance of the park) by SINAC.
- Economic activities related to:
  - Research and Education: that implies the arrival of tourists who use the services of lodging and food that provide SINAC and OET, as well as some hotels identified at local level. Similarly, activities related to tourism such as tours by boat on the Tempisque River and the different packages that travel agencies offer.
  - Livestock (in the modality of active management): that represents a system of concessions inside the PNPV, which is unique in Costa Rica.
- Education and training in environmental matters driven by the ACAT, Costa Rican and foreign universities, and NGOs.
- Leisure time and experience of visitors, provided by activities conducted inside the park and its surroundings, such as visits to the wetland, birds watching, amphibians and reptiles watching, diurnal and nocturnal walks, recreation on trails, and recreation in viewpoints.
- Threats on PNPV, including the recurrence of forest fires and negative impacts caused by agriculture located around the park. Both in terms of irrigation channels and deposition of agrochemicals.

In the following sections of this study will be presented an analysis of the contributions of PNPV at local level (Bagtzi, Falconiana, Bagaces and Bolsón), at regional level (Liberia and Cañas) and at national and international level based on the perspective of the cluster before mentioned<sup>8</sup>.

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<sup>8</sup> For more details see the methodology and fieldworks, which are presented on the Annexes.

**Figure 1**  
**Cluster of development around the PNPV**



*Source:* Own elaboration.

## 6. SYSTEMATIZATION AND ESTIMATION OF THE CONTRIBUTIONS OF PNPV

In the previous section was evidenced that PNPV provides monetary benefits (visitation incomes, etc.) and non-monetary contributions (scenic beauty, preserved biodiversity, etc.) to the country and the communities that are located in surrounding areas.<sup>9</sup>

An approximation to the estimated contributions in monetary terms is presented following. This document includes the data collected, systematized and analyzed when finishing the search for secondary information, interviews to key actors and fieldworks carried out in the framework of the project (for more details see annexes). It is important to mention that following the cluster-chain methodology used in this study were identified economic activities developed at the local level that generate benefits at local, regional and national levels.

Box 4 summarizes the analysis that is presented right now, with respect to the contributions estimated in monetary terms. In 2009, PNPV contributed with a total of 1.106 million colones to the economy and to the Costa Rican society. The bigger number of these incomes are generated in cluster activities with national scope (61.41%) and local (29,53%), followed by contributions attributable to PNPV at the international level (7,48%) and regional (1.58%), respectively (see charts 15, 16, 18 and 19).

The analysis that is made following is made based on the surveys that were applied during the project to different actors identified in the different clusters in PNPV. This information reflects the current state not only of the benefits that obtain these actors due to the existence of the park, but also suggestions and recommendations expressed by them and that are taken into account in the section of formulation of policies of this document.

### 6.1. Leisure time and spiritual experience

Biological richness (diversity of life zones and habitat), thanks to the existence of PNPV and its conservation, is very important for the country.

Beauty and spiritual landscape of PNPV (wetlands, lagoons and water bodies), as well as its biodiversity, are valuable contributions in monetary terms (generated incomes). However, they constitute the key original contribution of the park, which allows attracting a big number of visitors from other places and countries that require enjoying of these

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<sup>9</sup> Those located in Falconiana, Bagatzi and even in Bagaces.

#### BOX 4

##### **Total of contributions generated by PNPV in 2009 and its scope at national, regional and local level, respectively**

**Total:** 1.106 million colones  
or US\$ 1.9 million dollars  
(TC of 573.35 colones per US\$)

- National (61.41%)
- Local (29.53%)
- International (7.48%)
- Regional (1.58%)

**Source:** Charts 15, 16, 18 and 19.

benefits provided by nature in relation to the environmental services mentioned. Tourists have different options to enjoy the scenic beauty of PNPV since they have visits to the trails during the day and at night. On average, between 2005 and 2008, 19% from the total visitation were tourists who came from different parts of the world to enjoy the scenic beauty mentioned.

## **6.2. Research and education, articles, projects, donations**

PNPV plays a very important role as center of formation of professional charts for different universities both national and international ones. The previous is demonstrated with the fact that the average number of visitors between 2005 and 2008 was of 6000 of which 73% was composed of professors and students and 8% by researchers (the remaining 19% were tourists).

In PNPV there have been a great number of researches related to different topics of the Park. Like restoration of wetlands, active management, birds species in Palo Verde, communities surrounding to the National Park, among others. Between 1990 and 2005 are recorded more than 300 researches, 100 of them are found in the database of OET (BINABITROP, 2009) and about 200 at the library of the Biological Station in Palo Verde (OET, 2009). In recent years, INBIO has made two publications, one about trees (US\$13 each one) and another one about water plants (US\$20 each one) (INBIO, 2009).

ACAT also has the following articles online: Amphibians from PNPV, Birds from PNPV, Pollution of the ricefields in PNPV, Agricultural pollution in PNPV, Course: Botanical Principles and Identification of Arboreal Species Seasonal Forests ACAT inside the PNPV, Study about the flow of Tempisque river in PNPV, Technical data of PNPV, Management of the Wetland of PNPV, History about the creation of PNPV, Report about the Monitoring of the Management of Palo Verde 2008, Insects from PNPV, the threats that Palo Verde National Park has, Hydrological Management of PNPV, Mollusks of PNPV, Medicinal plants of PNPV, Final Project about Environmental Education of PNPV, Declaration Summary of PNPV, Restoration Bocana of PNPV, Priority Sites PNPV (ACAT, 2009).

Besides, in the administrative office of PN and ACAT, can be found documents related to different aspects of management of the Park.

## **6.3. The contributions of PNPV to the Local development: how and how much has the economic activities benefited in Bolsón and Bagaces?**

### **6.3.1. Impact on Local tourism.**

As previously mentioned, the observation of biodiversity of PNPV (reptiles, birds, among others) by researchers (8.2%), tourists (19,2%) and especially students and professors (72.6%) is the main objective of the visitation<sup>10</sup>.

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<sup>10</sup> Calculation made based on data provided by OET for the period May 2008-March 2009.

The visits of researchers, professors and students allow the provision of the services of accommodation and food in two shelters inside the Park and to a lesser extent some hotels located in Bagaces.

*6.3.1.1. Characterization of the offer*

In PNPV the visitors can be lodged in two shelters, one that is administrated by SINAC and the other one by OET.

Shelter of SINAC:

The lodging service is provided especially for national researchers who come from State Universities such as the Universidad Nacional (UNA), Universidad de Costa Rica (UCR), Universidad Estatal a Distancia (UNED) and Instituto Tecnológico de Costa Rica (ITCR).

The facilities have capacity for about 36 people in 6 rooms, which are placed on rooms that contain 3 cabins each. The 4 available toilets are located outside of such rooms. It also has a classroom with capacity for 40 people, a laboratory, a dining room and an area for camping (SINAC, 2009). In terms of fees, the shelter of SINAC offers differentiated prices to the visitors as is observed in box 5.

Shelter of OET:

The facilities of the Palo Verde Biological Station of OET have a shelter that has capacity for 36 people. This includes, rooms equipped with 3 cabins each. The dining room has capacity for 30 people. The fee for lodging and food varies considerably, in the box 5 is presented an approximation.

**BOX 5  
TOURISM IN PNPV**

**1. Shelter SINAC: Fees**  
day/person

National: lodging ₡2 000, breakfast: ₡3 000, lunch: ₡3 000, and dinner: ₡3000  
In total: ₡11 000/ day /person

Foreigners: lodging US\$13, breakfast: US\$6, lunch: US\$8, and dinner: US\$8  
In total: US\$35/ day /person.

Camping: US\$2

**2. Shelter OET: Approximation of the Fees** day/person

National: US\$57.5/ day /person.  
This includes lodging, 3 times of meal, one walk and the taxes.

Foreigners: US\$83/ day /person. This includes lodging, 3 times of meals, one walk and the taxes.

**Fee per type of visitor:**

- \$40 Researchers (3 meals, lodging, laboratories, internet, taxes, etc)
- \$23 Students (3 meals, lodging, laboratories, internet, taxes, etc)
- \$50 Professors (3 meals, lodging, laboratories, internet, taxes, etc)
- \$16 Tourist day (walk to the forest)
- \$80 Tourist Night (3 meals, lodging, walk, taxes)

**Source:** Allan (personal communication, 2009), and fieldwork OET 2009.

In addition to the rooms and the dining room, this Station has a room where lessons of environmental education are taught for up to 40 people and a laboratory.

In the case of both shelters, the amount that is charged in the quality of lodging and food is independent from the payment of the ticket price to PNPV. This must be paid in Los Negritos Post, which is located at the entrance of the park.



*Photo 5:* Shelter OET

### *6.3.1.2. Profiles of visitation and Average expense of tourists*

To obtain the sample for this work was taken into account the average of the visitation from 2005 to 2008 and then, were calculated the samples for the different kinds of visitors. In the case of the tourists were interviewed both national and foreigners between August, 2009 and May, 2010 (for more detail see annex 1). With the information gathered was made a profile of the average tourist in terms of stay, importance of the park and expenses.

According to the surveys, the main purpose of the visit was the watching of birds, given that is one of the few places where can be seen waterfowl, besides of founding a big variety of animals, combined with the existence of the wetland and dry forest.

As it is seen in chart 1 the majority of national and foreign tourists organized the trip on their own or other means (on average 74%), and through travel agencies or tour operators 26%. The means of transportations used are very varied for foreigners but the most common one is rent a car with an average of 11 days for rent. With respect to national tourists, they specified that they use another means of transportation such as the taxi. On average tourists stay in Palo Verde 2 days and the main activities done are walks (nocturnal and diurnal) for the observation of birds, reptiles and other kind of animals in the park.

*Chart N° 1*  
*General Characteristics of Tourists who visit PNPV*

	% of interviewees	Average time in PNPV	Organization of the trip		Means of transportation					Would they pay more for the Price of the ticket	
			Agency or Tour Operator	On his own / Other means	Public Bus	Tourist Bus	Rented Car	Own or family Car	Others	% YES	% NO
<i>Foreign Tourists</i>	88%	2,18	26%	74%	5%	2%	57%	14%	22%	53%	47%
<i>National Tourists</i>	12%	2,75	25%	75%	0%	0%	0%	0%	100%	63%	37%
<b><i>In Total</i></b>	<b><i>100%</i></b>	<b><i>4,90</i></b>	<b><i>51%</i></b>	<b><i>150%</i></b>	<b><i>5%</i></b>	<b><i>2%</i></b>	<b><i>57%</i></b>	<b><i>14%</i></b>	<b><i>122%</i></b>	<b><i>116%</i></b>	<b><i>84%</i></b>

*Source:* Own elaboration, with information from the fieldwork.



From the surveys applied only 20% of the interviewees know what SINAC is, 74% do not know, while 6% do not answer. This situation can be linked to the lack of pamphlets or other means for the tourists to know these aspects about the management of the park and that is more associated with MINAET than SINAC in the management.

64% of the interviewees agree with the management that SINAC carries out in PNPV, because of the protection and preservation that lead to the sustainability of natural resources when there is an equilibrium between nature and visitation; 14% do not agree, since there is cattle in the park, limited protection of the wetland, bad assignation of resources, and it needs a better control management of fires; and the remaining 22% do not answer or do not know how to answer due to a lack of knowledge. These answers reflect the lack of information for the tourist that was mentioned before, since are known the efforts of SINAC for the control of fires.

62% of the tourists consider that they must improve some of the services that are provided in the park like:

- ✓ Services of Guides in both seasons, and night tours, more walks and birds watching.
- ✓ Information of the park, and entrance, maps and that officials speak in English.
- ✓ More trails, viewpoints, better labeling of existing roads and trails.
- ✓ To improve infrastructure: restaurant, accommodation, toilets, camping and administrative offices, hot water, souvenirs shop and better fans.
- ✓ Highway of Bagaces to the park, improve it and level it, and more staff
- ✓ Park: Wetland, a biological farm, bird tables and connection with adjacent parks

While 29% consider they are fine and 9 % do not answer.

In the surveys was included a question about the availability of payment and 55% of interviewees would be willing to pay more for the ticket price (around \$7, 18 or €4.087, 11), to improve surveillance, more signage, protection of animals, night tours and tours by

#### **BOX 6**

##### **Average profile of the Tourist**

Average stay in the Country: 25.8 days

Average stay in PNPV: 2.25 days

Average people who accompany him/her: 1 to 3

Average cost of the air ticket: \$1.121, 32

Daily average expense of the Visitor: 42.633,83 colones (US\$74.90), for food and lodging.

Activities performed: (from the total of tourists, one tourist can perform more than one activity):

- Birds Watching: 92%
- Nocturnal walks: 39%
- Walks (trails): 58%
- Fauna Watching: 6%
- Tour by boat: 27%
- Walk on the swamp: 2%
- Sunset: 2%

Knowledge about the existence of the park before the visit:

- YES: 77%
- NO: 23%

How did you know: 47% through a Tourist Guide like Lonely Planet, 11% through an institution, 14% through Internet and television, 11% through a recommendation, 2% general knowledge and 15% do not answer

**Source:** Own elaboration according to fieldwork

boat, among others. 39% are among the ones who would not pay more due to they consider that the cost of the visit would be expensive, so it would be better to make a passport or a card of 1 year or 1 month for several parks and that could generate more incomes through tours and not through an increase in fares. 6% did not answer.

According to the survey 55% will not stay in communities, 42% yes and 3% did not answer. From the percentage that stay in near places 21% will do it in Monteverde, 14% in Arenal, 11% in Liberia, 11% in Rincón de la Vieja and the remaining 43% do it in other places. As regards the different places that they will visit in PNPV, 47% will not visit other places and 23% will visit especially other national parks and wildlife refuges, the remaining 30% did not answer.

From the interviewed foreign tourists who travel with packages of travel agencies or tour operators (chart 1) pay approximately on average ¢ 1.781.973, 31 (US\$3.130, 46). Besides, before getting to the park they visit other national parks near Liberia.

In chart 2 is presented a detail of the expenses incurred by the tourists before getting to the PNPV and during their stay there. It is important to emphasize that the bigger expense made by tourists is made before their arrival (61%) and not in the park (27%):

**Chart N° 2**  
**Daily Average Expense of the tourist PNPV**

<i>Expense Category</i>		<i>Colones</i>	<i>Dollars</i>	<i>Percentages added up per scale</i>	
Average expense of the tourist before getting to the PNPV	Food	¢23.444,66	\$41,19	6%	
	Lodging	Hotel	¢146.976,80	\$258,20	30%
		Cabin	¢86.903,40	\$152,67	
		Other*	-	-	
		<b>Total average of expense on lodging</b>	<b>¢116.940,10</b>	<b>\$205,43</b>	
	Transportation	Maritime	-	-	25%
		Public Bus	¢4.964,22	\$8,72	
		Tourist Bus	-	-	
		Own or family car	¢25.473,32	\$44,75	
		Rented Car	¢350.758,08	\$616,19	
Other means of transportation**		¢12.310,84	\$21,63		
	<b>Total average of expense on transportation</b>	<b>¢98.376,62</b>	<b>\$172,82</b>		
Expense inside Palo Verde National Park	Food and Lodging	¢42.633,83	\$74,90	27%	
	Tour by boat	¢34.154,17	\$60,00		
	Admission	¢5.692,36	\$10,00		
	Other expenses***	¢22.769,45	\$40,00		
	<b>Total of daily expense in PNPV</b>	<b>¢105.249,82</b>	<b>\$184,90</b>		

Average expense of the tourist in Guanacaste	Lodging	Hotels and Cabins	€45.688,75	\$80,26	12%
<b>Total Average expense of the Tourist</b>			<b>€389.699,94</b>	<b>\$684,60</b>	<b>100%</b>

**Source:** Own elaboration based on the results of the survey.

\*Other refers to lodging in Hotel, camping, house of a friend, own house

\*\*Other means of transportation refer to: small bus, motorcycle, taxi.

\*\*\*It includes costs made such as: Souvenir

**The average exchange rate to convert dollars into colones is of € 569,24 obtained from the months of surveying (August, December 2009 and March 2010)**

### 6.3.1.3. Profiles of visitation and Average expense of researchers

Approximately, 8% from the annual total of visitors of PNPV correspond to researchers. Both national and foreign researchers were interviewed between August, 2009 and May, 2010 (for more detail see annex 1). With the information gathered was made a profile of the average researcher in terms of stay, importance of the park and expenses.

With respect to the purpose by which they visit the park, 65% of this group says that the park itself represents the main reason for their visit, while 35% visit the park in order to observe certain kinds of birds, flora and fauna, the wetland, to visit the facilities and take courses of the OET, among others.

According to surveys applied, the importance of the park is the fact that it has a specific biodiversity which results to be the object of study for researchers, besides of being a dry tropical forest which is of great interest, just like the wetland and it has waterfowl. The conservation of habitats in PNPV allows studying the behavior of iguanas and observing a wide variety of butterflies, amphibians and birds. Additionally, interviewees express that the Park is a safe area for research.

In relation with the researchers, the OET is performing two roles. *First*, it is the recognition of PNPV by a great number of visitors. *Second*, this organization is in charge of taking some of the researchers to the place. The researchers consulted come from universities of the United States, Colombia and Universities of Costa Rica, where they have positions such as researchers, professors of laboratory and doctoral students in biology, assistants, volunteers, rangers and biologists.

At the moment of the consultation, most of the researchers do not support financially and in any other way the maintenance of any protected area. However, most of them say to be willing to do so in the future. On the other hand, 59% of interviewees say they have knowledge about what SINAC is, while 21% do not have knowledge and 20% do not answer.

**BOX 7**

**Researchers**

Accommodated: Shelter OET and SINAC

Average days:

- *In the park:* 31
- *In the country:* 89 days.

People who accompany him/her: 38,24% is alone, 17,65% accompany him/her among 1 to 3 people, 5,88% among 7 and 9 and 38,24% more than 10 people.

Nationality:

- 68% foreigners
- 32% national.

Source of Financing for Research: NSF and OET and Foundations for research on butterflies (Research Project), OET, University Scholarships, CRUSA, IRES Program, among others.

Cost of Research: is approximately of 1.719.405, 04 colones on average and \$3,170.

Target audience: 35% for academicians, 27% for students, and 6% for public spreading and 32% did not answer.

Publication of the Research: 44% in an International or Scientific Magazine, besides of newspapers or ecological articles, among others.

Area of Interest: 12% birds, 15% wetland 9% forest species, and 53% Amphibians and Reptiles, Butterflies, Termites, Mutualism, astronomy etc and 11% do not answer.

Visits to other areas: 47% will not visit other place, only 33% yes (33% in Lomas de Barbudal, 25% surrounding areas, 25% Rincón de la Vieja and 50% others such as Ostional, Corcovado, PN. V.Tenorio and PN Santa Rosa) and 18% did not answer.

**Source:** Fieldwork

Regarding the management carried out in PNPV, 41% do not answer or do not know it. While 47% agree (given they are in charge of the permissions, maintenance of the water mirrors of the wetland, avoiding hunting and maintenance of the environment); and the remaining 12% do not agree due to is perceived the need of a management plan of the wetland, it has lack of funds, interest and low motivation of the staff, they must improve the facilities and some sides of the wetland is not accessible to research.

Regarding if must be improved any service in the park, 15% of who answered, say no, while 23% consider that should be improved the infrastructure and camping, accommodation, cleaning and maintenance, engines of motorboats and boats, among others; and 62% do not answer.

According to information provided in the applied surveys, one research done has an average cost of approximately 1.7 million colones. Meanwhile, the average expenses of the researcher's stay at the country and in the Park amount to approximately ¢645.828.41, which is subdivided as is presented in chart 3:

**Chart N° 3**  
**Average expense of the Researcher**

Category of Cost		Colones	Dollars	Percentages added up per scale
To arrive to the country	Air ticket	¢ 348.876,51	\$625,03	54%
Average expenses before getting to PNPV	Food	¢ 33.781,55	\$60,52	43%
	Lodging	¢ 84.074,30	\$150,62	
	Other	¢ 41.518,24	\$74,38	
	Transportation	¢ 116.282,47	\$208,33	
	<b>Total of expense before getting to PNPV</b>	<b>¢ 275.656,56</b>	<b>\$493,86</b>	
Inside Palo Verde National Park		¢ 21.295,34	\$38,15	3%
<b>Total of expenses for foreign researchers</b>		<b>¢ 645.828,42</b>	<b>\$1.157,04</b>	<b>100%</b>

*Source:* Own elaboration according to the information in the surveys.

**Exchange Rate ¢558.17, (average of the months of August, September, December 2009, February and March April and May 2010)**

With respect to the global economic crisis, 11% of researchers affirm having felt its effect, given that their budget declined in a 30% or the visit is very short and just for exploration, 24% were affected and 65% did not answer. Regarding the means of transportation, 32% used the car of OET, or institutional car to get to the park, only 41% went on own car and 27% on public, private bus or rented car.

#### 6.3.1.4. Profiles of visitation and average expense of professors

The interviews were applied both to national and foreign professors between August, 2009 and March, 2010 (for more detail see annex 1). With the information gathered was made a profile for professors and another one for average students in terms of stay, importance of the park and expenses.

It was interviewed to professors from different Universities of Costa Rica, the Netherlands, United States and Germany, besides of a high school from the province of San José and a university one from Cartago, among others. The interviewed professors visit the park on average 1, 5 times a year, with average groups of 18 people approximately, who stay in the park around 4 days.

71% from the interviewed professors are attracted by the Park, the remaining 29% by La Selva Station, Monte Verde and Liberia, the student's training, natural areas in the region, among others.

Regarding the interest of study, 11% are interested in birds (Jabirú ‘*Jabirú mycteria*’, Piches ‘*Dendrocygna autumnalis*’, Ibis Blanco ‘*Eudocimus albus*’, among others) while 2% are interested in wetlands and 4% are interested in forest species; around 49% have an academic interest about the microbiology of the ground, butterflies, tropical medicine and public health, environment, genetics of population, among others; and for the remaining 31% the PNPV is very attractive totally and 3% do not answer.

Around 69% of interviewees have knowledge about what SINAC is, the remaining 31% do not know or did not answer; despite of that 58% are in favor of the management that this entity carries out due to it makes possible: to maintain the wetland and the conservation of nature, and it administers the funds of the park, 31% do not know or do not answer but they consider that the management is very limited and without much activity of management, and 11% do not agree with given the inadequate management of invading species, and because of the livestock activity, an abandonment of the park, camping areas, to improve the access to the park and maintenance of facilities.

Likewise, 64% of professors consider that could be improved the services of the park:

- ✓ More staff and better public attention.
- ✓ To repair the facilities and infrastructure (camping area), and access to the park.
- ✓ To offer more information by SINAC, as well as terrestrial and maritime Tours.
- ✓ Clean toilets and drinking water.
- ✓ To maintain the Lagoon, trails, signs.

**BOX 8**

**Professors**

Accommodated: Shelter of OET and SINAC

Nationality:

- 44% foreigners
- 56% national.

Average days in the country: 25 days.

Average days in the park: 4 days.

Source of Financing for Research:

- Own sources: 22%
- Donation: 9%
- Others: 60% such as: High School, University, among others.
- Do not answer: 9%

Cost of research: 78% do not know or did not answer and approximately 22% have a cost of 180.071,70 colones on average.

Usage of what was learned: 4% in publications 22% for training of other professors, 18% education to communities or organized groups, 49% preparation of report, birds tracking, education of students, environment programs.

Visits to other areas: 47% will visit other places: Lomas de Barbudal, Rincón de la Vieja, Tenorio, la Selva, Surrounding communities (Bagaces, Cañas, Guayabo), Hermosa beach and 44% will not visit other place.

Effect of the Crisis: 40% Yes (less capital, travel allowance and budget), 53% No and 7% do not answer.

**Source:** Fieldwork

- ✓ To work with surrounding communities and more research opportunities.

20% consider that the services are fine and 16% do not answer.

On the other hand, 33% of professors accept to have known about the existence of the park through a course, 4% through a training, while 20% through a reference from other professor, and 7% through internet, and the remaining 36% through studies of parks, volunteering tasks, primary school, among others.

The means by which they visited the park were: 6.66% travel agencies or tour operators, 20% on their own, 55.56% by OET, 15.56% through other means (Universities, educational programs and environmental education programs) and 2.22% did not answer.

According to the information collected, the expenses that interviewed professors had to get to and stay in the park are about ₡334.895, 04 for national professors and ₡ 1.485.959, 00 for foreign professors, given that they must pay airline ticket (according to details in chart 4). 36% got to the park through the transportation of the OET, University, or institutional car, 53% through tourist bus and 11% through rented car.

**Chart N° 4**  
**Expenses of the Average Professor**

Category of Cost		National			Foreign		
		Colones	Dollars	Percentages added up per scale	Colones	Dollars	Percentages added up per scale
To arrive in the country	Airline Ticket			0%	<b>₡395.364,52</b>	<b>\$693,21</b>	27%
Average expenses before getting to PNPV	Food	₡13.658,02	\$23,95	96%	₡101.163,35	\$177,38	71%
	Lodging*	₡9.778,41	\$17,14		₡210.209,56	\$368,57	
	Other	₡12.832,56	\$22,50		₡70.056,27	\$122,83	
	Transportation	₡286.276,46	\$501,94		₡679.650,41	\$1.191,67	
	<b>Total of expense before getting to PNPV</b>	<b>₡322.545,45</b>	<b>\$565,54</b>		<b>₡1.061.079,59</b>	<b>\$1.860,45</b>	
Inside Palo Verde National Park		<b>₡12.349,59</b>	<b>\$21,65</b>	4%	<b>₡29.514,89</b>	<b>\$51,75</b>	2%
<b>Total of expenses for the Professor</b>		<b>₡334.895,04</b>	<b>\$587,19</b>	<b>100%</b>	<b>₡1.485.959,00</b>	<b>\$2.605,41</b>	<b>100%</b>

\*Some national professors before going to PNPV visited other Biological Stations like La Selva, so they had more expenses.

Source: Own elaboration according to the information in the surveys.

Exchange Rate ₡570.34, (average of the months of August, October, and November 2009, January, February and March 2010)

### 6.3.1.5. Profiles of visitation and average expense of students

Students, both national and foreign were interviewed between August, 2009 and May, 2010 (for more detail see annex 1). With the information gathered was made the profile of the average student in terms of stay, importance of the park and expenses.

According to the results, 90% of students visit the park with groups of more than 10 people, while 4% between 7 and 9, 5% alone or between 1 and 3 people and 1% did not answer.

These groups are attracted in a 69% by the park and 31% by its proximity to other parks, beaches, tour by boat, the OET, researches, birds, amphibians and reptiles (animals and nature), courses, wetland, among others. The main attractions of the park are the wetland, flora and fauna of this place, especially reptiles and birds and the dry forest.

60% of students must prepare a kind of report: scientific, investigative, educational, academic, statistical, informative, articles, evaluative, interpretative, presentations, among others and the remaining 40% must not prepare any kind of report.

The last place of stay of the students before getting to the park was:

#### **BOX 9**

#### **Students**

Accommodated: Shelter of OET and SINAC

Average days in the park: 3

Nationality:

- 63% national
- 37% foreigners

Source of Financing for research: 47% is financed by own resources, 8% through donations and 7% through research projects, while 20% through the OET, Scholarships, University, travel allowance, CONAPE, among others and the remaining 18% did not answer or do not apply.

Cost of Research: is approximately of 82.349,23 colones on average (\$146, 73).

Target Audience of the results of the visit: 25% for professors, 33% other students, 4% researchers, 25% have as target audience tourists, researches, to have personal knowledge, communities, among others; and the remaining 23% did not answer or do not apply (a total of students, 10% answered more than one option).

Preparation of Report: 40% do not prepare any kind of report, while 60% do prepare it.

Area of Interest: Birds, Amphibians, Mammals, Reptiles, Wetland, Forest Species, Mushrooms, Ecosystem, Global Health and Tropical Medicine, Dry Forest, Insects, among others.

**Source:** Fieldwork



**Chart N° 5**  
**Last place of stay of the students**

<i>Percentage</i>	<i>Place</i>
42%	Metropolitan Area
5%	Guanacaste
2%	Puntarenas
11%	Granada and León of Nicaragua
2%	United States
3%	Palo Verde National Park
35%	Do not know/ do not answer/ Do not apply
<b>100%</b>	<b>Total</b>

*Source:* Own elaboration, according to the data collected in the survey

The majority of students (56%) got to the park through a university or high school course, while 28% did it through the OET, and 3% on their own, and 10% through travel agencies or tour operators and 3% did not answer. From the students interviewed 78% knew about the existence of the park through the OET, Universities (UNA, UCR, CUC, Yale, among others), 20% through general culture, books, professors, school, programs, recommendations, among others, and the remaining 2% through internet and television.

68% of students come from Costa Rican Universities and 28% from Universities of the United States, while 4% correspond to other countries. The careers that students course are: biology, veterinary science, technicians in the management of forest resources, tourism, naturalist guides, social studies, sciences, history, geography, forest and chemical engineering, global health, among others.

Besides of Palo Verde, 62% think about visiting other places such as: Lomas of Barbudal Biological Reserve, Cipancí Wildlife Refuge, National Parks such as Rincón de la Vieja, Santa Rosa, Arenal and Marino Baulas; beaches (Tamarindo, playa grande), Las Pumas Rescue Centre, Surrounding Communities (Bagaces, Bagatzi, Liberia), La Selva, Birds Island, Hacienda el Viejo, among others. The remaining 38% will just visit the PNPV.

60% of students have knowledge about what SINAC is, 36% do not and 5% do not answer.

About the management that this institution carries out in the park, 67% agree due to:

- ✓ It has an optimal management of the resources; they avoid a little bit the human impact on the park.
- ✓ They take control of the usage of the areas and protect an endangered forest.
- ✓ The management is necessary and they do so in a sustainable way.
- ✓ It helps in everything related to what wildlife is, forest matters and protection of natural resources and wetland.
- ✓ They work with low budgets and they do what they have to do.

- ✓ It helps to the development of researches.

10% do not agree due to:

- ✓ The introduction of cattle in the park, which modifies the wetlands.
- ✓ Lack of more resources, besides of improving infrastructure and hiring more officials.
- ✓ Lack of more programs of technical, human, and promotional support.
- ✓ The park is bad, by sending the resources to unique box and by a lack of support by the government.
- ✓ There is no enough financial support by institutions and maintenance of trails.

With respect to the remaining 23%, they do not know or do not answer, given that do not know about the management that SINAC carries out, and consider not to have a criterion to answer.

Regarding the services that the park offers, 35% think they should not be improved, 9% do not answer or do not know and 56% recommend to improve services such as:

- ✓ To improve the access to the park, the road and transportation.
- ✓ More information about the park and conservation, better maps, as well as expert guides.
- ✓ To improve the facilities of the studio, laboratories, computer equipment, library.
- ✓ More security and improvements to the service of camping, as well as bathrooms, showers, toilets and bedrooms.
- ✓ To improve the trails, wetlands, the park is a little bit abandoned.
- ✓ A place to watch birds, bicycles to visit the Tempisque River, a place for meals, a kind of coffee bar.
- ✓ Interaction with communities, protection, environmental education and environmental management.

With respect to the expenses they had to do the research inside the park, the student spends on average ¢14.836, 64 colones per day in the park, and before getting to the park he/she spends ¢33.400, 53 colones for national students and ¢442.184, 39 colones for foreigners approximately given that they have expenses on the airline ticket (see chart 6). Regarding the economic crisis 44% have felt an effect on their budget, which has caused a decrease for trips and that economic financing is not approved for researches, so, when this is more expensive, are less the students who can attend, among others; on the other hand, 25% have not felt any effect and 31% do not answer or do not know.

Chart N° 6  
Expenses of the Average Student

Category of Cost		National			Foreign		
		Colones	Dollars	Percentages added up per scale	Colones	Dollars	Percentages added up per scale
To arrive in the country	Airline Ticket			0%	¢313.759,31	\$559,07	68%
Average Expenses before getting to PNPV	Food	¢3.861,51	\$6,88	74%	¢32.737,79	\$58,33	28%
	Lodging*	¢10.475,71	\$18,67		¢65.903,18	\$117,43	
	Other	¢11.498,70	\$20,49		¢22.729,38	\$40,50	
	Transportation	¢7.564,62	\$13,48		¢7.054,73	\$12,57	
	<b>Total of expense before getting to PNPV</b>	<b>¢33.400,53</b>	<b>\$59,51</b>		<b>¢128.425,08</b>	<b>\$228,83</b>	
Inside Palo Verde National Park		¢11.885,19	\$21,18	26%	¢17.788,09	\$31,70	4%
<b>Total of expenses for the Student</b>		<b>¢45.285,71</b>	<b>\$80,69</b>	<b>100%</b>	<b>¢459.972,47</b>	<b>\$819,59</b>	<b>100%</b>

\*Some national students before going to PNPV visited other Biological Stations like La Selva, as well as hotels, so they had more expenses.

Source: Own elaboration according to the information in the surveys.

Exchange Rate ¢561.22, (average of the months of August, October, November 2009, January, February, April, May 2010)

#### 6.3.1.6. Considerations of the information obtained in the Profiles of visitation and average expense

As was mentioned in the first sections of this document, PNPV has great national and international relevance because of its diverse and unusual ecosystems. MINAET- SINAC has made efforts for the management of the wetland and to mitigate the threats of the economic activities surrounding to the area and those attributed to forest fires. However, many of the visitors of the Park do not know what SINAC is; the previous can be solved with pamphlets and face to face information when the tourist arrives.

An important aspect that was detected during the fieldwork is that rangers cannot provide detailed information to the tourist, due to that also they must accomplish other tasks and duties. Also, was evidenced that the Park does not hand in pamphlets or informative maps for the tourists. Though the main objective of the management is the preservation of the Park, it is important to take into account that must be invested in better training of the rangers and better information for the tourist. The support of the surrounding communities for the attention of tourists can be also a good option, but it should structure a program of training that should be given by rangers and professionals that have worked in the Park.

### 6.3.2. Stockbreeding concessions in Palo Verde National Park

This activity is developed by some stockbreeders from the towns of Bagatzi and Falconiana, among others, which obtain benefits to maintain their cattle in the park, since prices of the renting of land are three times cheaper than outside the PNPV. This activity is supervised by the administration of the park and it has a regulatory framework.

8 stockbreeders were interviewed from which 10 currently have the concession. Half of the interviewees have more than 10 years of owning the concession inside the park, and the other half have on average between 4 to 6 years of owning it; they rent between 80 and 1000 hectares. Before stockbreeding they were devoted to some other activities: 50% agriculture to sow rice (mainly), beans, corn and cassava, also 38% just stockbreeding but in other place, and 12% had both cattle and sowing of rice.

37,5% of the stockbreeders are devoted to only to stockbreeding; while 62,5% have another economic activity and from the total 37,5% perform more than one economic activity apart from stockbreeding, such as: plots for agriculture (50%), milking for the production of sour cream and cheese (37,5%) and hens (12,5%).

Despite of having other productive activities, for 75% of the interviewees, stockbreeding is the one that represents the more important income, followed by 12, 5% of the plots and other 12, 5% in other jobs.

To improve and maintain stockbreeding inside the park they recommend:

- ✓ A biologist to analyze what the cattle does and if it is good or not in any sector.
- ✓ To increase tourism.
- ✓ Do not restrict stockbreeding.
- ✓ To avoid an increase in the number of permissions.
- ✓ To reduce the prices of grazing.
- ✓ To open more water mirrors for birds and tourists to arrive there.

#### **BOX 10** **Stockbreeding Concessions**

Type of activity: Stockbreeding

Canon: 1.000 Colones per head

# of Stockbreeding Concessions: 10

Origin of the stockbreeders:

- Bagatzi
- Bagaces
- Guayabo
- Liberia

How many agree with the Management of SINAC? 63% in favor and the remaining 38% are not in favor.

Where do you buy the goods?:

- Only in Bagaces: 12, 5%
- Bagaces and Cañas: 37, 5%
- Only in Cañas: 12, 5%
- Guayabo: 12, 5%
- Liberia: 25%

Sale of the Cattle: 12% do not sale it; while 88% sale the cattle that maintain in the park and from these ones 75% do it in the Auction of Cañas.

Maintain the cattle the whole year in PNPV:

- Yes: 25%    • No: 50%
- Do not answer: 25%

**Source:** Fieldwork

Most stockbreeders are members of the Livestock Chamber of Public Auction of Cañas, which is where they sell the cattle they have in the park, besides some of them are part of the Chamber of Stockbreeders of Bagaces or they are associated to Dos Pinos. The number of head of cattle they own is about 50-500 approximately, and they develop the stockbreeding of meat, milk and reproduction of young animals, of which on average obtain the following economic benefits:

**Chart N° 7**  
***Average economic benefits from the sale of products of stockbreeders from PNPV***

<i>Sale of product</i>	<i>Average Benefits</i>
Meat/ Beef	¢1.117.857,14
Milk	¢12.000,00
Cheese	¢301.000,00

*Source:* Own elaboration, according to data of the interviews to stockbreeders

As is appreciated, the reproduction of young animals (sale of meat and beef) is the one that most incomes generate. The average costs that stockbreeders have are presented following:

**Chart N° 8**  
***Average economic expenses from the sale of products of stockbreeders from PNPV***

<i>Expense</i>	<i>Monthly Amount</i>
Payment of Concession	¢177.409,67
Food products, Veterinary Surgery and Medicines	¢122.942,71
Laborers	¢248.229,17
Other expenses*	¢173.750,00

*Source:* Own elaboration, according to data of the interviews to stockbreeders

\*It corresponds to expenses due to transportation of stockbreeders and arrangements of fence

As stockbreeding of Young animals predominates, the cattle maintain, and do not replace constantly. 50% of the cases, the cattle do not maintain the whole year inside the park, generally in the months of September and October, they are moved to other place, but sometimes since the month of June.

### 6.3.3. Shelters, Hotels and Cabins

#### Shelters

Inside the park are found two shelters which offer their services to researchers, professors, students and tourists who visit the park, to do their studies, researches or bird watching, among others.

One of the shelters offers since 2000 the services of offices in an informal way, but from 2003 has achieved to have a bigger promotion and coordination with groups; in the case of the Other shelter, it offers the services approximately since 40 years ago when they chose the area of Palo Verde to develop a project based on a comparative study of ecosystems, besides of this area has one of the few remnants of dry forest in Central America. They are promoted through internet; besides of national and international contacts, and use newspapers, magazines, books and television.

The shelters buy many of their inputs in Bagaces like supermarkets, butcher's shops, wood deposits (construction materials and maintenance), as well as the gas station, and other businesses of San José (chart 9). As a whole work around 13 to 14 people in low season and around 20 people in high season.

**BOX 11  
Shelters**

Location: Palo Verde National Park

Economic Crisis: Affected by the decrease and cancellation of groups and tourists, especially 2009.

Guests:

- **H1** 50% national and 50% foreigners.
- **H2** 2% national and 98% foreigners.

Income depends on the park: 100%

Services they provide

- ✓ Food
- ✓ Lodging
- ✓ Guided walks
- ✓ Training for local guides
- ✓ Laboratories and internet

**Source:** Fieldwork

**Chart N° 9  
Monthly Average Expenses**

<i>Inputs</i>	<i>Colones</i>	<i>Dollars</i>
<i>Restaurant</i>	¢ 1.824.666,67	\$3.083,90
<i>Lodging</i>	¢ 647.000,00	\$1.093,51
<i>Gasoline and Gas</i>	¢ 256.916,00	\$434,22
<i>Maintenance</i>	¢ 1.200.000,00	\$2.028,14
<i>Souvenir Shops</i>	¢ 1.199.435,00	\$2.027,19
<b>Fixed expenses</b>	¢ 639.583,71	\$1.080,97
<b>Salaries*</b>	¢ 2.844.987,00	\$4.808,37
<b>Total</b>	<b>¢8.612.588,38</b>	<b>\$14.556,30</b>

**Source:** Own elaboration, according to instruments

\*Salaries, which do not depend on the State

**Exchange Rate: 591,6**

An annual donation is made to the park to collaborate for the management of this one. Regarding the distribution of the incomes we can observe in chart 10.

**Chart N° 10**  
**Annual Average Incomes\***

<i>Shelters</i>	<i>Colones</i>	<i>Dollars</i>
<i>Canon 2009</i>	¢ 20.000.000,00	\$33.803,00
<i>Shelter 2009**</i>	¢ 221.557.375,08	\$374.459,00
<i>Donation</i>	¢ 1.000.000,00	\$1.690,00
<b><i>Total</i></b>	<b>¢ 242.557.375,08</b>	<b>\$409.952,00</b>

*Source:* Own elaboration, according to instruments and information provided by Mora. M and Aguilar. M, 2010 (SINAC)

\*Incomes that do not depend on the State.

\*\*They correspond to the sales of lodging, food and souvenirs

**Exchange Rate: ¢ 591,6**

**BOX 12**

**Hotels and Cabins**

Location: Bagaces

Number of businesses: 3

Visitation Rate: it has maintained for some, while others have increased. Generally, all months have guests and do not change per seasons.

Economic Crisis: they have not felt much the effect.

Service of restaurant: 100% No.

Price of lodging: on average \$14.53 in low season and \$15.99 in high season/person/night.

Guests: per low season 2 and per high season 40. From which 90% are national tourists and 10% foreign tourists.

Average monthly income: ¢1.100.000,<sup>00</sup>

Income depends on the park: 13%

Cabins and Bedrooms: 6 cabins and 18 bedrooms, average of 21 beds.

**Source:** Fieldwork

Hotels and Cabins

There is no a big number of hotels and cabins around the park, the communities of Bagatzi and Falconiana, which are the nearest ones, have not developed productive activities related to tourism; another important aspect corresponds to so particular features that PNPV has, which is more a research centre that a tourist centre, so, it has two shelters that offer services of lodging and food, for researchers, professors, students and tourists who visit the park, to develop their studies or birds watching, among others.

In Bagaces, which is found to 30 kilometers from the park, there are some hotels that were interviewed to know about their relation with the park. Three owners of hotels were interviewed. These ones have on average around 4 to 6 years of being operating; in its majority, they were the same owners who built, in other cases were people from the community who helped them. But, before the construction of hotels and cabins, the usage of the land was for houses, one farm of breeding of horses, forest and a lot.

100% of the interviewees have some other sources of incomes a little bit more important such as pensions, crafts and passementerie.



With respect to the place from where goods for the hotel come from, these ones are bought in Bagaces, Guayabo, Liberia and some were built by themselves. Regarding the employees on average they have 3, from which 2 are members of the family nucleus, and 1 not. All of them are from Bagaces, just like all the goods they buy. According to the answers of interviewees, they do not have relation to any organization or company, one of them said that would like to become a member of the Chamber of Tourism and the town, besides of becoming a member of Travel Agencies and Tour Operators, either from Guanacaste or San José. For the time being, they do not offer support to maintenance of any protected area, but they do agree to do it in the future.

Hotels are promoted by a webpage, billboards/signs/brochures, Chamber of tourism, besides of tourist guides and magazines, also by programs of television, newspapers and yellow pages. From the interviewees, only 33% has website, another 33% is in process and the remaining 34% does not have. Moreover, the segment of the market corresponds to massive tourism, bird watchers and those who want to know the park, agents and employees of banks, which have as means of transportation rented cars. From the customers, 32% are attracted by the park, while 68% are attracted by the proximity there is with other national parks, beaches and Liberia, besides, also the fact that part of the customers are public employees who make trips in the area. 67% do not think to supply more services or build more; 33% want to supply services of transportation and tours for parks, besides of building more cabins.

Regarding the average investment made up to date is about 17, 5 million colones for the smallest cabins, but there is a project of higher scale, which exceeds the 130 million colones approximately. Only one of the interviewees gave the information about the costs of the business, which is about 350.000 colones per cost of operation and maintenance per season (every 6 months), an expense of 100.000 colones per salaries and 405.000 colones on average on fixed monthly expenses.

Also 100% have water through an aqueduct, they do not have a sewage treatment plant, wastes are collected by the municipality, they do not have certifications; and only 67% practice the separation and recycling of wastes.

#### 6.3.4. Restaurants and Coffee Bars

In total were identified 2 restaurants in the area.

This restaurant has like 8 years of being operating in the community of Bolsón; the construction of it was made by the owners who remodeled the garage that was where the restaurant is found now. The goods, furniture, and other equipment of the restaurant, were bought in Filadelfia; on the other hand, the inputs they use, the majority are harvested by them, and the other part is bought in the supermarket of Liberia and Santa Cruz. This



*Photo 6: Example OF Lunch*



business to start operating has invested ₡6.000.000 approximately.

According to the information gathered the means of transportation that customers of the restaurant use are rented cars or through services of Tour Operators. Besides, customers in low season use to be 100% foreigners, while in high season 10% are national and 90% foreigners, which are attracted 100% by the existence of the park. The way of promoting is through people of the town and with the selling of the packages of the tour by boat, which is promoted through tour operators. It has relation with ICT, Chambers of Tourism, Tour Operators, Travel Agencies, Hotels, and institutions like MEIC.

**BOX 13**

**Restaurant**

Location: Bolsón

Has website: Yes

Months of lowest visitation: September and October.

Visitation Rate: it has maintained given that it works with the same companies always.

Economic Crisis: it caused a decrease in the tourist activity.

Capacity of the restaurant: He/she thinks about making the restaurant bigger.

Do you collaborate with the maintenance of any protected area? Yes, they contribute to the Cipancí Wildlife Refuge.

**Source:** Fieldwork

The restaurant keeps 3 employees fixed in each season, which pertain to the same family nucleus, just during the high season, it is hired 4 more employees who pertain to the communities of Bolsón and Ortega. For the 7 workers is paid an approximate of ₡1.750.000 in salaries.

Regarding the sales, these ones vary very much from one season to another, but they depend 100% on the existence of the park (see chart 11). It was not possible to gather information from the interviewee, the amounts corresponding to operational costs and incomes of the business so that in the following chart is appreciated the monthly estimate sales per season:

**Chart N° 11**  
**Sales Coffee Bars and Restaurants at local level**

<i>Estimated Sales*</i>	<i>Monthly Customers</i>	<i>Amount</i>
<b>High Season</b>	300	₡ 1.720.016,13
<b>Low Season</b>	50	₡ 286.669,35

**Source:** Own elaboration, according to data gathered in the interview

\*It is an estimation of monthly sales, due to the owner did not know the specific information.

The restaurant has water through an aqueduct, it does not have a treatment plant for sewage, and it does not practice the separation and recycling of solid wastes, which are collected by a truck, so it must be paid ₡15.000, likewise, food wastes are used to breed pigs. It does not have any kind of certification either.

The *second* restaurant is located in Bagaces and with 2 years of operation, it has faced a boom period in its first year, and problems in the second one and beginning of the third one because of the crisis and the decline of tourism, which affected the growth of the business and hence, of its sales. It has been promoted through Internet, billboards, people from the town and television (local channel 36). The months of lower visitation are September and October, for both seasons the higher visitation is of national tourists, since in low season 80% of the customers are national and in high season 60%, while that in the case of foreigners in low season is 20% and in high season 40%.

From the customers of the restaurant only 5% are attracted by Palo Verde National Park, 95% are attracted by beaches and parties. It is estimated that its sales do not depend on the park, but it was estimated in chart 12 that sales related to the park monthly are about:

**Chart N° 12**  
**Incomes of restaurants**

<i>Sales</i>	<i>Amount</i>
<b>High Season</b>	¢ 300.000,00
<b>Low Season</b>	¢ 200.000,00
<i>Costs of Operation</i>	<i>Amount</i>
<b>High Season</b>	¢ 350.000,00
<b>Low Season</b>	¢ 275.000,00

*Source:* Own elaboration, according to the survey.

They buy the inputs in Bagaces and in San José. It does not collaborate nor has relation with any organization, they have well, and it practices the recycling, donated the plastic, and fertilizer for plants, besides of reutilizing the sewage, and the garbage with the municipal truck. It does not have certification, and they think that SINAC should put across more the Park to the community.

#### 6.3.5. Transportation by boat



**Photo 7:** Tour by Boat on the Tempisque River

This activity consists of a tour by Boat on the Tempisque River, going around one of the boundaries of PNPV. In total are 8 entrepreneurs who have 21 vessels (Francisco Ramos, personal communication, 2009). For this study 6 entrepreneur owners of 14 vessels were interviewed.

The entity in charge of hand in the permissions for usage of operation of the River is the Tempisque Conservation Area (ACT) from Bolsón, it is in charge of that boatmen to comply with the policy of INS and the Captancy of Port, to have the permission. Moreover, for the attraction of the customers, some

**BOX 14**

**Haulers**

Type of activities: Transportation by boat (6).

Services they offer?

- Transportation
- Tours
- Food

Average capacity of the boats: 20 passengers.

Average of boats they have: 2

Origin of the average customers:

- 16% national
- 84% foreigners

Fees of average tours:

- National: ₡5.400
- Foreigners: \$ 37,65

Average trips per season:

- Low: 3 per week
- High: 2, 4 per day.

Opinion about the Management of MINAE: 83% against, 17% did not answer.

Have certifications: 100% No.

In favor of the increase of tourism for the park: 83%

**Source:** Fieldwork

boatmen have agreements with hotels that bring to them the guests, through travel agencies linked to or of which they are owners, among others.

For the 100% of the interviewees, the boats are of them, and they were bought: 50% in San Carlos (Fibra Managua), 16,7% in Puerto de San Pablo, 16,7% in Puerto Humo and the remaining 16,7% in Puerto Viejo de Abangares, while the engines 100% were bought in San José (in Suzuki, Yamaha Agency and Grupo Q de Lachtner Nissan). With respect to the working staff, 83% of the boatmen have between 1 to 2 employees who are members of the family unit, and 17% have 8 workers who are relatives; while 50% of the boatmen hire 2 captains who are outside of the family unit, 17% hire around 5 people, 16, 5% only during the high season hire 1 employee and 16, 5% do not have employees who are not relatives.

From the boatmen interviewed, 83% have other sources of incomes such as: a restaurant, fixed salary, carpentry works, a travel agency, and motorboats but for business fishing, only 17% live from this activity.

On average can be said that the incomes of the boatmen depend 76% on tourism; and it is important to mention that for 67% of the haulers the sales that are made 100% to visitors of Palo Verde National Park, 16, 5% depend 5% on the

visitors of the park and 16, 5% do not know how much do your sales to visitors of the park amount to? Despite of this activity is an important part of their incomes, the majority does not think about expanding and offering more services, due to the existence of a decree that limits the cargo capacity and the number of inscribed boats, besides of there is much competence, which does not make the investment profitable; the ones who would offer more services do not do it due to a lack of resources or they think about offering another kinds of services like horseback ridings. Likewise, only 17% are registered in an Association of Development.

As is appreciated in box 14 the majority are in favor of an increase of tourism due to: more tourists can do more tours, which benefit all the people, if more people enter, the park will have more resources to carry out their tasks in a better way, and thus, offering better services, and 17% who are not in favor of an increase is because they consider that should

exist a better distribution of the visitors to not saturate the cargo capacity. They consider that to promote and maintain tourism, the park needs:

- ✓ To provide more support to projects and more vision.
- ✓ To improve the treatment to tourists, calling the attention of the customers and not to charge them prices.
- ✓ To create places that call the attention and to diversify the services such as trails and tours.
- ✓ Better communication among the administrations of the parks.
- ✓ To clean the water mirrors, to sow other types of trees that activate the species, making more interesting the park.

Regarding the investment, annual incomes due to the tour and average monthly expenditures, will be detailed in chart 13:

**Chart N° 13**  
**Investment, Incomes and Expenditures motorboats activities**

<i>Item: average amounts</i>	<i>Colones</i>	<i>Dollars</i>
<b>Investment: Motorboats / Engines</b>	¢ 19.421.190,86	\$34.053,51
<b>Total of investment</b>	<b>¢ 19.421.190,86</b>	<b>\$34.053,51</b>
<b>Annual Incomes</b>	¢ 13.142.947,92	\$22.982,18
<b>Total of Expenditures</b>	<b>¢ 13.142.947,92</b>	<b>\$22.982,18</b>
<b>Monthly Expenditures</b>	¢ 258.156,43	\$454,00
<b>Monthly Salaries</b>	¢ 519.439,92	\$911,00
<b>Total of Expenditures</b>	<b>¢777.596,35</b>	<b>\$1.365,00</b>

*Source:* Own elaboration, according to data gathered in the interview

#### 6.3.6. Other activities (related activities)

**BOX 15**

**Related Activities**

Type of activities: Veterinary Surgery.

Services or products they provide?

- Vaccination
- Surgeries
- Medicines

**Continues...**

#### *Veterinary Surgery*

According to the analysis carried out for stockbreeders can be seen that the veterinary surgeries in the analysis play an important activity as related activity, because they are the ones responsible for supplying to stockbreeders, food supplements and necessary medicines. Hence, veterinary surgeries from Bagaces were interviewed and they have between 1-3 years of

*Continues...*

**BOX 15**

**Related Activities**

Origin of the customers:

- Most of them are national 65%
- Few are foreigners 35%.

How many in favor of an increase in tourism for the park?

- 100%

Opinion about the Management of MINAE: They do not know how to answer.

Improvements to increase tourism in the park:

- More propaganda and Information
- To do Tours.

Where do you buy the goods?:

- Business Firms (San José, Alajuela)

Means of transportation to take and bring goods: Car and truck.

Where do you buy the possessions and furniture?: They were in the business.

Are you thinking on expanding the business or services: Yes. A bigger business and more products for cattle

Investment: Approximately of  $\text{C}\$7.000.000,_{00}$

**Source:** Fieldwork

providing the service. Given the type of activity is not affected by high or low seasons, during the year it always maintains the same number of workers, two belonging to the family unit and one employee.

From their sales 50% depend on stockbreeding, approximately monthly total sales are about 10 million colones, but to this must be deducted  $\text{C}\$232,000$  for the payment of salaries, approximately  $\text{C}\$115,000$  for fixed expenses plus the expenses they had each month for the payment to suppliers.

The water they use comes from an aqueduct, they do not have sewage treatment plant, solid wastes are deposited in the garbage truck, they do not practice the separation or recycling, nor has any kind of certification, or is a member of any association.

***Other related activities***

Due to inside the park are found the Stations of SINAC and OET, some of the businesses from the community of Bagaces are benefited from the sales they make to these instances, and among them are supermarkets, butcher's shop, lumberyards and gas station.

These businesses except the gas station are not directly benefited from tourism in the area, given that Bagaces has not characterized by being a place of visit or tourist interest. Therefore, as mentioned before the benefit is given through sales made to SINAC and OET, since most of their customers are 78% national, the remaining 22% are foreigners, who in most of the cases reside in the place already and therefore, for 75% of the enterprises interviewed, it is not possible to know what percentage of their incomes depend on tourism, while 25% believe that 20% of their sales can be related to it.

**Chart N° 14**  
**Sale Related Activities to OET and SINAC**

<i>Monthly Total Sales Made</i>		<i>Total of sales</i>
<i>SINAC</i>	<i>OET</i>	
<i>Colones</i>		
¢ 575.000,00	¢ 2.813.885,00	¢ 3.388.885,00
<i>Dollars</i>		
\$1.029	\$5.037	<b>\$6.067</b>

*Source:* Own elaboration according to the surveys of the fieldwork

As is evidenced in the previous chart the monthly sales are made in greater proportion to OET, this is also because SINAC receives some direct inputs from the conservation area.

These businesses get their inputs, furniture and equipment in most of cases from the central valley. 100% are in favor of an increase of tourism to the park since it can generate a benefit for everyone and the town. 75% do not know about the management of the park, only 25% agree since it meets the management despite the limitations that gives the Government to it. They believe that to increase and promote tourism to the park should be:

- ✓ To improve the access roads, more investment and to offer more tours to attract tourists.
- ✓ More information about the services that the park provides, an information center not only in San Jose but also in several provinces, as well as more information to businesses so they can inform tourists.
- ✓ Organizations in Bagaces that provide information (community organization), as well as greater relationship between Bagaces and Palo Verde National Park.

#### 6.3.7. Summary of the incomes generated at local level by PNPV

The local contributions of economic activities that are developed due to the existence of PNPV in 2009 amounted to ¢ 326 million colones (US\$567,344), which represented 29.53% from the total contributions. As was mentioned above the local level refers to all those incomes from activities that are developed in PVNP, or in the communities of Bolsón and Bagaces and which were described and classified in the previous section. According to that presented in Chart 15 the biggest contribution to the local level is produced by the recruitment of labor force from the area that represented in 2009 53.64% from the local contributions.

The second most important source of contributions is the donation made by tourists who from Bolsón and Bebedero take a tour by boat and do a trip on the Tempisque River watching the scenic beauty of PNPV, each tourist is charged US\$6 of which are given US\$3 for the Tempisque Conservation Area of SINAC and US\$3 for the owner of the land

where the jetty is located and which is private, in total these amounts represented 16.17% of the contributions generated at local level.

The purchase to local suppliers represented 11.99% and earnings to owners of hotels, cabins and shelters represented 9.58%. The stockbreeding activity present in PNPV obtained a participation of 4.35% and the remaining of contributions represented 4.28% including incomes per tour by boat, incomes of veterinary surgeries and other activities (supermarkets, gas station, butcher's shop etc).

**Chart N° 15**  
**Systematization of local contributions of PNPV 2009**

SCOPE-SCALE OF THE CONTRIBUTION OR BENEFIT	BENEFITED ACTIVITIES AND CLASSIFICATION OF USERS		TYPE OF CONTRIBUTION (GOOD/SERVICE/EXTERNALITY) VALUED ACCORDING TO SOURCES		OBSERVATIONS	% of contribution
	Type of Activity	Type of user/benefited	Incomes			
			Colones	US\$		
<b>LOCAL LEVEL</b>	Donation by visitors Tour Tempisque River	Entrance to the river	¢26.410.708	\$46.461	In 2008 were received 15,487 visitors who did the Tour on the Tempisque River Sector	8,09
		Usage of the land	¢26.410.708	\$46.461		8,09
	Hotels, cabins and Shelters	Owners of businesses	¢31.289.511	\$55.044	Correspond to utilities generated that are distributed at local level for the smooth running of shelters	9,58
	Stockbreeding	Local stockbreeders	¢14.192.773	\$24.544	Correspond to the payment of the stockbreeding concession	4,35
	Tours by boat	Local boatmen	¢3.417.544	\$5.910	Few are the expenses on salaries, cleaning and operations.	1,05
	Veterinary Surgeries	Owners of businesses	¢7.217.986	\$12.482	Few are the expenses on salaries and public services.	2,21
	Restaurants and Coffee Bars	Owners of businesses	¢0	\$0	Fieldwork	0,00
	Other activities (supermarkets, butcher's shops, gas stations.)	Owners of businesses	¢3.330.432	\$5.759	Fieldwork	1,02
	Purchases to suppliers	Suppliers (Food and Beverages, souvenir shops, other implements)	¢39.155.239	\$67.712	From the expense on purchases to suppliers made annually	11,99
	Generation of employment in the area and payments for salaries	Around 200 people who work in hotels, cabins and related activities	¢175.195.216	\$302.971	In all the surveyed activities	53,64
<b>Local Total</b>			<b>¢326.620.118</b>	<b>\$567.344</b>	<b>Total Percentage of Contribution</b>	<b>100</b>
<b>Percentage of participation in total incomes generated</b>						<b>29,53%</b>

Source: Own elaboration



#### 6.4. The contributions of PNPV to the Regional development: how and how much have the economic activities in Cañas and Liberia benefited?

The regional contributions of economic activities that are developed due to the existence of PNPV in 2009 amounted to about ₡17 million colones (US\$31,313), which represented 1.58% of total contributions. As was mentioned before the regional level refers to all those incomes that are reflected in economic activities in Cañas and Liberia and that are related to the existence of PNPV. According to that presented in Chart 16 the biggest contribution to the regional level is produced by the purchase to suppliers of food, beverages, souvenirs and others that represented in 2009 64.73% of the regional contributions.

The second most important source of contributions are the policies and navigation permissions for boats that take tourists to see the boundaries of PNPV from the Tempisque River that must be paid in Cañas, the amount in the quality of this had a participation of 17.85 % of the regional contribution; very close to this one is the one of transportation by taxi, which represented 17.42% of the regional contributions of PNPV.

**Chart N° 16**  
**Systematization of the Regional contributions of PNPV 2009**

SCOPE-SCALE OF THE CONTRIBUTION OR BENEFIT	BENEFITED ACTIVITIES AND CLASSIFICATION OF USERS		TYPE OF CONTRIBUTION (GOOD/SERVICE/EXTERNALITY) VALUED ACCORDING TO SOURCES		OBSERVATIONS	% of contribution
	Type of activity	Type of user/benefited	Incomes			
			Colones	US\$		
AMBITO REGIONAL	Transportation Taxi	Operator of the service in Guanacaste	₡3.044.235	\$5.355	Calculation of transportation according to tourists and researchers	17,42
	Purchases to suppliers	Suppliers (Food and Beverages, souvenir shops, other tools)	₡11.311.933	\$19.562	Purchases to suppliers from Cañas, Liberia and other regions of the near area	64,73
	Policies and permissions for navigation	From 10 boatmen	₡3.120.000	\$5.396	They are 300.000 of policy and 12.000 of annual permission	17,85
<b>Regional Total</b>			<b>₡17.476.168</b>	<b>\$30.313</b>	<b>Total Percentage of Contribution</b>	<b>100</b>
<b>Percentage of participation in total incomes generated</b>						<b>1,58%</b>

Source: Own elaboration



## 6.5. The contributions of PNPV to the National development: how and how much have the economic activities in San José and not regional benefited?

### 6.5.1. Travel Agencies

Travel agencies constitute an important component in the cluster associated with PNPV. These businesses offer different packages and recommend the tourist places to their clients. Therefore, it is important to identify the impact that can have this activity in the tourist development of the park; since the PNPV is more important due to it is a favorable place for research other than a tourist centre.

During the second fieldwork, the research team interviews both owners and managers of the travel agencies. The results suggest that the surveyed agencies have on average of 9 years of being operating.

In 50% of the cases, the business they have is rented. Meanwhile, the remaining percentage is divided into a 25% corresponding to an own business and the other 25% do not answer.

In terms of incomes, 75% of interviewees say that the travel agencies constitute its main source of incomes, so that tourism represents the entirety of their incomes. Meanwhile, the remaining 25% have additional sources of income.

The furniture and other equipment of the agencies are acquired both abroad and in Costa Rica (San José and San Isidro), in stores such as Dell, Office Depot and Compumaster.

According to the information gathered, the agencies carry 251 tourists, on average, in high season and 145 in low season. Of which, only 2% correspond to national and the remaining 98% refers to foreigners.

The frequency of the removal of tourists to PNPV is, on average, 2 times per month and approximately 15 people (though this figure can vary between 2 and 21).

#### BOX 16

##### TRAVEL AGENCIES IN PNPV

Type of activity: Tourist Services

Number of travel agencies analyzed: 8

How many in favor of an increase of tourism for the park? 62,5% in favor, 12,5% is not in favor and 25% did not answer; likewise, 25% of the agencies are interested in knowing the environmental impact that this would have, that increase in tourism.

Do you agree to collaborate in the Management of PNPV?:

- Yes: 62,5% (promoting the visitation and information about the park)
- No: 12,5% (lack of time)
- Do not answer or do not know: 25%

Are you thinking on expanding the business or services you offer:

- Yes: 25% (in expansion and advertising)
- No: 75% (do not need it o du to it is risky)

Investment: On average the investment of the agencies is of ₡30.704.388, 71 approximately

% Sale related to PNPV: 5% on average. Around 15% - 0.10% of the sales of the agencies

**Source:** Fieldwork

The promotion of services provided is done by different means. 38% is associated with the promotion made exclusively through the internet. Meanwhile, 13% of interviewees use foreign contacts, while the remaining 49% use both means.

During the high season, the agencies maintain, on average, 12 employees, of which 4 are relatives and 8 are external. Meanwhile, the low season represents a reduction in recruitment, which passes to 8 people including 3 relatives and 6 external.

The water used in the agencies comes mostly from aqueducts, and just in one case it corresponds to a well. The 63% of interviewees lacked of water treatment plant, while 25% said that they have this system and the remaining 12% do not answer.

The majority of travel agencies practice the separation and recycling of wastes. However, organic wastes are managed through the service of the Municipality. Only one agency has the ICT and commercial certification.

Of all the agencies surveyed, only 38% are members of any association such as ICT, CFCC, Ornithological Association of Costa Rica and Pro Park.

With regard to the services and tours they offer are:

- Tour/Eco-tours: Birds watching
- Tour specialized in families.
- Botanical Tour.
- Tourism of General Interest.
- Private Tours, highly informative and flexible.
- Circuit of hotels, car rental and flights.
- Packages for hikes visiting Chirripó and Corcovado.
- Reservation of Hotels and activities
- Receptive tourism-elaboration of tours

Travel agencies require inputs for providing these services. These inputs include: cars, rented and own, tour operators, minibuses, and boats, among others. The suppliers of these inputs are: Star Service, Costa Rica Maravilloso, Aventuras Arenal, Adobe, Interbus / Grayline, Rental Car, OET Station, Cata Tours, among others.

According to these services are presented the following chart of incomes and average expenses of the productive activity:

**Chart N° 17**  
***Incomes and expenses of the travel agencies that visit PNPV***  
***-Per season-***

<i>Average Item</i>	<i>Monthly Amount</i>
<b>Incomes</b>	
<i>High Season</i>	¢ 60.699.838,51
<i>Low Season</i>	¢ 22.783.829,84
<b>Total</b>	<b>¢ 83.483.668,35</b>
<b>Expenses</b>	
<i>Several Expenses</i>	¢ 519.374,13
<i>Salaries</i>	¢ 1.394.012,68
<i>Inputs</i>	¢ 95.770,31
<b>Total</b>	<b>¢ 2.009.157,12</b>

*Source:* Own elaboration, according to data gathered in the interview

\*The amounts are a monthly average from the reported ones per month in the interviews; we have to take into account that not all of them reported the amounts.

To promote and maintain tourism in the park, interviewees recommend:

- To maintain and improve the access road to the park by Bagaces.
- To improve the facilities of accommodation and to offer more options for lodging.
- To create a center for visitors.
- To build some bungalows with bathrooms for tourists.
- To repair the bathrooms of the Stations.
- More focus on foreign markets.
- Greater involvement of educational institutions.

With regard to the financial crisis, 50% of interviewees estimated that it has not affected them too much; in fact, the porcine flu and the earthquake of Cinchona had more impact. Meanwhile, 37.5% said that there is a decrease and 12.5% of interviewees did not answer.

#### 6.5.2. Summary of the National contributions of PNPV

The contributions at national level of the economic activities that are developed due to the existence of PNPV in 2009 amounted to ¢679 million colones (US\$1,193,217), what represented a 61.41% of the total contributions. As was mentioned previously the national level refers to all those incomes that are reflected in economic activities in San Jose or in other cities far from the regional level and that were described and classified in the previous section. According to that presented in Chart 18 the biggest contribution to the national level is received by rent a car with 48.71%, the visitors rent cars in San Jose to then go to PNPV, this represents the biggest amount due to 53% of the tourists interviewed rent cars to visit the park, like 9% of the researchers; but, given that rent a cars do not have information about the place their customer go, was not possible to investigate with these entities.

The second activity that is benefited from the existence of PNPV is tour operators and travel agencies located in San Jose that capture 30.91% of the incomes generated by the existence of this area.

Because of many of the visitors who arrive to PNPV do so in groups, especially 11% of the professors, so they hire buses, this is the third activity that receives higher benefits with a 10.13%. The purchase to suppliers represented 6.36%. The incomes for SINAC in the quality of tickets represent 2.42%. The rest of contributions represented 1.46% which includes the payment of electricity, gasoline sale and bus transportation.

**Chart N° 18**  
**Systematization of the National Contributions of PNPV 2009**

SCOPE-SCALE OF THE CONTRIBUTION OR BENEFIT	BENEFITED ACTIVITIES AND CLASSIFICATION OF USERS		TYPE OF CONTRIBUTION (GOOD/SERVICE/EXTERNALITY) VALUED ACCORDING TO SOURCES		OBSERVATIONS	% of contribution
	Type of Activity	Type of user/benefited	Incomes			
			Colones	US\$		
NATIONAL LEVEL	Payment for electricity	ICE and other services	€1.835.496	\$3.174	It corresponds to the percentage of payment of hotels, restaurants, related activities associated with the park	0,27
	Purchases to suppliers	Suppliers (Food and Beverages, souvenir shops, other tools)	€43.238.754	\$74.774	From the expense in purchases to suppliers, the total was divided into 50% who buy in SJ and 50% in the area of Limón.	6,36
	Tickets for the Park.	Incomes for SINAC-MINAE by admission to PNPV.	€16.407.267	\$28.374	Tourists, 2009. SINAC regional.	2,42
	Transportation by renting cars	Rent-a-car	€330.938.011	\$582.177	Calculation based on the information obtained from tourists, researchers and professors who came through this means, on average 12 days car and 6 days bus.	48,71
		Rent-a-Bus	€68.811.476	\$121.051		10,13
	Transportation by bus	Enterprise in San José	€2.632.094	\$4.552	Calculation based on tourists, researchers and students who answered	0,39
	Sale of gasoline	Gas Stations	€5.480.859	\$9.642	11% of tourists and 6% of the interviewed researchers said the amount they spend on gasoline \$41,50 approximately	0,81
Tour-operators and travel agencies	Enterprises in San José whose sales remain in Costa Rica by selling to PNPV	€210.026.693	\$369.473	From the applied surveys only 20% tourists and 2% students traveled through travel agency or tour operator, with a cost of the package of \$3144 and \$1333 approximately combined with the incomes of the agencies coming from the tour to the park	30,91	
<b>National Total</b>			<b>€679.370.650</b>	<b>\$1.193.217</b>	<b>Total Percentage of Contribution</b>	<b>100</b>
<b>Percentage of participation in total incomes generated</b>						<b>61,41%</b>

*Source:* Own elaboration based on the fieldwork.

### 6.6. The contributions of PNPV at International level: how and how much have foreign enterprises benefited?

The contributions at international level of the economic activities that are developed due to the existence of PNPV amounted in 2009 to ¢82 million colones (US\$145,572), what represented a 7.48% of the total contributions. The international level refers to all those incomes that are reflected in economic activities outside the country that were described and classified in the previous sections. According to that presented in Chart 19 the biggest contribution at international level is received by suppliers or activities that receive transfers of the incomes generated in PNPV with 56.52%.

The second activity that is benefited from the existence of PNPV are the tour operators and travel agencies located outside the country that capture 43.48% of the incomes generated by the existence of this area.

*Chart N° 19  
Systematization of the International contributions of PNPV 2009*

SCOPE-SCALE OF THE CONTRIBUTION OR BENEFIT	BENEFITED ACTIVITIES AND CLASSIFICATION OF USERS		TYPE OF CONTRIBUTION (GOOD/SERVICE/EXTERNALITY) VALUED ACCORDING TO SOURCES		OBSERVATIONS	% of contribution
	Type of Activity	Type of user/benefited	Incomes			
			Colones	US\$		
INTERNATIONAL LEVEL	Travel Agencies	International enterprises whose sales are made abroad by selling packages to PNPV	¢35.976.039	\$63.288	From the applied surveys only 7% tourists, 2% professors and 2% students traveled through an international travel agency, with a cost of the package of \$3100, \$2150 and \$1650 approximately	43,48
	Purchases to suppliers	Suppliers (transfers abroad)	¢46.774.256	\$82.284	From the expense in purchases to suppliers made annually	56,52
<b>International Total</b>			<b>¢82.750.295</b>	<b>\$145.572</b>	<b>Total Percentage of Contribution</b>	<b>100</b>
<b>Percentage of participation in total incomes generated</b>						<b>7,48%</b>
<b>TOTAL</b>			<b>¢1.106.217.230</b>	<b>\$1.936.446,4</b>	<b>Porcentaje Total</b>	<b>100%</b>

Source: Fieldwork

## 7. ANALYSIS OF STRENGTHS, OPPORTUNITIES, WEAKNESSES AND THREATS (FODA)

With the primary objective of identifying all those positive aspects (strengths and opportunities) that must be strengthened and enhanced, as well as those negative aspects (weaknesses and threats) that must be mitigated or eliminated to maintain and improve the valuable qualitative and quantitative contributions that provides the PNPV to the country, it is carried out an analysis of FODA. Information sources for this have been the bibliographical review, field work (various interviews and workshop) and consultation to experts, made in the course of the investigation.



*Photo 8:* Forest fire in PNPV

### 7.1. Strengths

The PNPV is widely recognized for its rich biodiversity, especially bird species and amphibians. The process followed by the State for the conservation of the area has allowed the consolidation of wetland areas that would otherwise have disappeared. The ecosystem little by little has been becoming stronger and now it is less fragile than some years ago when it was not a National Park.

The active management has allowed the control of fires and the consolidation of the stockbreeding concessions system that allows the control of the growth of typha that chokes the lagoon and support the activity of stockbreeders in the area that otherwise would have to pay prices much higher for the usage of land to put their cattle.

The OET and other institutions have generated a great amount of information that has allowed the knowledge of the different species that make up the park. This knowledge is the one that allows visitors to come to visit the place in search of some species of interest.

The road although have some problems, in some months is accessible most of the year.

### 7.2. Opportunities

The actions that have been developed so far in managing the park shows that is possible to find new ways to allow a better development of the park although there are restrictions on the road.

The PN was included in the list of Wetlands of International Importance, on December 27<sup>th</sup>, 1991 (Ramsar Site), this is a tool for the searching of funds and support at international level.

There are many opportunities to make alliances not only with organizations at national and international level, but also with the communities and surrounding economic activities that have shown great interest in getting involved in the management of the park. It should continue with the multidisciplinary meetings involving state institutions and agricultural activities to mitigate environmental impacts as has been done now.

### **7.3. Weaknesses**

One of the main weaknesses in the management of the park is the lack of economic and human resources, this has resulted in the deterioration of resources of the park.

There is no large investment to be undertaken, not only in maintaining the infrastructure of the park but also in the eradication of the typha and look for resources for solving specific problems but there is no one integral solution to prevent further problems.

This has caused that the infrastructure in the park is badly damaged both the administrative area and the camping area and signage. Besides, the tasks to control fires are not always made on time and this is highly vulnerable for the park's resources.

The lack of communication with communities was something that was evident in interviews and workshops conducted for the project. Surely, due to the lack of resources and time, the responsible of the park do not involve the community in activities that are relevant to them such as the inclusion in the structuring of the management plan.

The park does not have in this moment an updated management plan though have been done many development activities for its elaboration nowadays, what we have is a draft that has been worked for more than three years and has not been completed.

### **7.4. Threats**

The threats identified around the PNPV have 3 levels of intensity. The first level refers to low intensity threats. These ones include: fragmentation of habitat by logging, loss of biodiversity through introduction of exotic species, monocultivations in buffering zones, and species loss by side effect (cause), and landscape transformation.

A second level is associated with threats of medium intensity where the surplus of water of the irrigation project along with the vandalism in patrimony properties are identified inside this type of threats. For its part, high-intensity threats refer to forest fires.

## **8. POLICIES RELATED TO THE MANAGEMENT OF PNPV**

The policies respond to processes and to an action that brings together all the actions taken by individuals (or groups), public and private, in order to perform pre-defined objectives. Given that policies are not the product of spontaneity; these actions correspond to both transitory efforts to become decisions on operational proposals such as the efforts developed to make the big and small changes (Van Meter, Van Horn, 1993). For this reason, the phase of implementation of these policies is initiated when the previous decisions have correctly set the goals and objectives.

In a policy are distinguished several phases. The first one is the elaboration or definition, which is the conceptualization of the vision for the long term. The second one is the implementation, execution or performance, which represents the implementation of that policy. The third one is the impact of the policy, which refers to the consequences derived from its implementation and execution.

In the practice, policies should not be considered as formulas. This is because, to different processes, they correspond to different dynamics, structures and relationships among the factors that influence the development and implementation of the policy. This implies that in each particular case should be defined policies according to their goals and specific objectives. There are different means to achieve the objectives of the policy; these can range from plans, actions or structured strategies to make the objectives operational. Similarly, there are several instruments for its implementation.

In general terms, policies refer to instruments that can use the government to change the behavior or economic, social and environmental behaviors. In this regard, following are presented policy recommendations that arise as a result of the analysis of the case study of Palo Verde National Park. The eventual evaluation and implementation of these ones through the creation of instruments, actions, or other mechanisms must be conducted by the National System of Conservation Areas (SINAC).

In Chart 20 are detailed some policy recommendations for PNPV, these recommendations arise from aspects identified in the fieldwork, interviews and on the Draft of the Park's Management Plan, which already identifies problems of the park and possible solutions.



*Chart N° 20*  
*Policy Recommendations*

<i>Thematic Area</i>	<i>Objectives</i>	<i>Policies</i>
<b>1. Biodiversity</b>	<p><b>1.1</b> To contribute to protection and conservation of Biodiversity in PNPV</p> <p><b>1.2</b> To improve the management of threats for biodiversity</p>	<p>1.1. To carry out a planning through the plan of tourist activities, in areas of tourist visitation of the Park and Reserve. Creation of a plan for Ecotourism</p> <p>1.2. To establish a plan for prioritized fangueo according to the critical areas of forests, in which is controlled the Typha and is carried out the opening of water mirrors. Prioritized to wetlands inside and in buffering areas of ASP</p>
<b>2. Productive Activities</b>	<p><b>2.1</b> To promote the development of productive activities at local level, which have low environmental impacts and generate synergies that allow inserting more actively the communities of the districts of Bagatzi and Falconiana in the tourist cluster around the PNPV.</p> <p><b>2.2.</b> To create alliances with the enterprises that have crops in the surroundings of PNPV to minimize the impact of their activities</p>	<p>2.1. To strengthen through training the activities of local entrepreneurship.</p> <p>2.2. To create financial programs that promotes local investments.</p> <p>2.3. To promote the diversification of tourist services that is provided.</p> <p>2.4. To coordinate with surrounding private enterprises ways of sustainable production according to the objectives of conservation of the park</p>
<b>3. Institutional Capacities</b>	<p><b>3.1</b> To improve the institutional and administrative capacities of SINAC-MINAET for a better management of PNPV</p>	<p>3.1.1 To provide more technical, financial and human resources to PNPV.</p> <p>3.1.2 To improve infrastructure and information available (trails, signage) and associated services (facilities, communications) inside the PNPV.</p> <p>3.1.3 To increase the processes of training of staff from the Park about topics of environmental management and attention to tourists.</p> <p>3.1.4 The relationships between MINAET-SINAC and agricultural entrepreneurs and the organizations of national and international research must be transparent under cooperative and collaborative outlines.</p>

<i>Thematic Area</i>	<i>Objectives</i>	<i>Policies</i>
	<p><b>3.2.</b> Inclusion of social organizations and civil society for decision-making.</p> <p><b>3.3.</b> To create a plan for volunteering that include all the processes</p>	<p>3.2.1 Boost to programs of environmental education at formal level.</p> <p>3.2.2 Participation of NGO's in decision-making and activities that improve the environmental management inside and in the surroundings of PNPV.</p>
<b>4. Creation of capacities</b>	<p><b>4.1</b> To promote the access to education and generation of programs according to the needs of local actors</p>	<p>4.1 The education linked to tourist activity in a direct or indirect way, must be the fundamental axis for the creation of capacities in the region.</p>

**Source:** Own elaboration based on the Draft of the Management Plan PNPB-RBLM-2008

## 9. SUMMARY AND CONCLUSIONS

As seen in this case study at local, regional and national level, the PNPV provides important contributions both to the country and to surrounding communities of it. In the previous sections are performed both qualitative and quantitative approximations (monetary) of the main components of the *cluster* of activities formed around the PNPV.

Among the most important **qualitative contributions** of PNPV are highlighted the spiritual experience, recreation and leisure time that represents the scenic beauty provided by wetlands and specific ecosystems of the area. Also, it is important to mention the protection of biodiversity as one of the most relevant environmental services in the area, as well as the value of natural heritage that is given by tourists and surrounding communities to the park.

The generation of employment in some of the surrounding communities has also a qualitative component, since it allows that these people have sources of income and hence, a way of living and developing in the activities that they can perform with their qualifications.

Another very important aspect in this analysis is the identification of the communities with the Park, which must be worked more. Many of the villagers want to know more about the Park and to have more contact with the activities that are developed there. Some ways must be searched through which this relation can be enhanced, without damaging the preservation of the resources that are there.

With respect to approximate **quantitative contributions** in terms of monetary income based on primary and secondary information gathered in this case, was calculated that PNPV generated a total approximate income of **¢1.106.217.230 (US\$1.936.446,4)** in 2009. This total contribution has had different incidence in the socio-geographical field considered also in the study: local, regional, national and international.

According to the exposed in section 6.1, at **local level**, has been benefited in 2009 by a total income of approximately ¢326.620.118 (US\$567.344), mostly thanks to activities linked to visitation attracted by PNPV. The item, which was the most benefited, was the generation of local jobs with a 53, 64% from the total of the contributions at local level. It is very important to mention that probably the total calculated, and mainly, the individual items of incomes counted are lower than the real ones, due to incomplete information and rebuilt in some cases (travel agencies, tour operators, etc) based on techniques of indirect approximation.

At the **regional level**, the contributions of the existence of PNPV were of ¢17.476.168 (US\$ \$30.313). Chart 16 shows clearly that the most benefited activity (income of 64.73%) were the suppliers who sell inputs to activities done thanks to the existence of PNPV.

According to chart 18, **national contributions** have had a bigger incidence in San José or Central Valley, and have impacted to a lesser proportion to local and regional scales. The contribution of national scope amounted to ¢679.370.650 (US\$ 1.193.217). From this contribution were benefited firstly rent a cars (48, 71%) with headquarters in San José, which are hired by visitors to take their trip to PNPV. Moreover, PNPV generated them indirectly incomes to firms that rent buses in the quality of renting (10, 13%).

The economic concept of conservation and visitation of PNPV for the national economy is indisputable. Such contribution would have been much bigger in the present and even more in the future, if it would have been possible to consider and count adequately the contributions at national level that PNPV provides in terms of environmental services. In particular, the social value of conservation of wetlands and biodiversity that inhabits on them, whose scenic beauty is highly appreciated by their visitors.

With respect to the future of the local and regional development, it should be taken into account the weakness in the capacities of inhabitants from the towns of Bagatzi and Curubandé to insert more actively in the cluster of economic activities generated around the PNPV.

Another important aspect is the coordination that must be carried out with agricultural companies and public and private institutions that work in the area to mitigate the effects that are causing in PNPV by the usage of fertilizers and floods caused by the irrigation system.

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# ANNEXES



## ANNEX 1 METHODOLOGY OF THE FIELDWORK CARRIED OUT IN PNPV

### *1. Design, testing and validation of the instruments for the collection of primary information*

In 2002, the project developed to analyze the contributions of the National Parks and Biological Reserves creates a total of 4 instruments to collect information during the fieldworks. In this regard, the interviews focus on: (1) key actors, (2) restaurants and coffee bars, supermarkets, (3) workshops, excursions, and other related tourist activities, and (4) hotels / cabins / camping / house renting. All information gathered is systematized and analyzed for the three case studies: Poas Volcano National Park, Chirripó National Park and Cahuita National Park.

These instruments are used as valuable input to initiate this investigation. First, these instruments are reviewed by the working group, which after making it necessary changes it is proceeded to test them during a first exploratory visit to PNPV, where surveys are validated by local experts, which include rangers, officials from SINAC and key actors.

The 4 initial instruments are fed back both by experts and by the experience of the working group of the project that visits the area of study. This new knowledge is included in these instruments, which in turn are followed by 4 new surveys that respond to the productive dynamics that make up the cluster analyzed in PNPV.<sup>11</sup>

### *2. Collection of information and surveys*

For the collection of information three field trips were made to Palo Verde National Park. The *first one* was from April 4<sup>th</sup> to April 8<sup>th</sup>, 2009, in that same week we went to Rincón de la Vieja National Park, during this week a recognition of the area and park was made, besides of speaking to experts. The *second* trip was from August 5<sup>th</sup> to August 8<sup>th</sup>, 2009, during the fieldwork some stockbreeders that possess concession in the park were surveyed, besides of tourists, professors and researchers who were in the park; besides of interviewing the responsible in charge of the shelter of OET and SINAC, and leave surveys in both places to apply them to different visitors of the park. During the *third* trip that was from December 7<sup>th</sup> to December 9<sup>th</sup>, 2009, another part of stockbreeders was surveyed, surveys left in OET for tourists, students, professors and researchers were picked up; also, we moved to other towns to interview the hauler of boats that make tours in Palo Verde, in the same way productive activities such as hotels, restaurants and related activities were surveyed, speaking also with key actors from the place. The *fourth* trip was from February 22<sup>nd</sup> to February 23<sup>rd</sup>, 2010, surveys that were left in OET and SINAC were collected; likewise, productive activities from Bagaces such as supermarkets, gas station, among

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<sup>11</sup> Annex 2 presents the instruments in detail. Additionally, these surveys have an English language version, which is presented in the document entitled “Case of Study of Palo Verde National Park”, which constitutes another product within this project.

others were interviewed. The *last* trip was from May 19<sup>th</sup>, 2010, all the surveys that were in SINAC and OET were collected.

The instruments used for the fieldwork were surveys for:

- ✓ **(1) Tourists:** from which information about the park is gathered, as well as the construction of the cluster of tourism. The surveyed tourists were the ones who were inside the park, either staying at the SINAC or OET or they go visiting.
- ✓ **(2) Professors, (3) Researchers and (4) Students:** given the features of the park, surveys were applied to professors, researchers and students, who were developing studies in the park, where was collected information about the attractions and importance of the park, the study of interest and generalities of their research.
- ✓ **(3) Stockbreeders:** the surveys were applied to different stockbreeders who have concessions inside the park in order to identify the benefits, characteristics of the activity, type of cattle, among others, being a characteristic activity of the park.
- ✓ **(4) Travel Agencies:** are surveyed those agencies that had relation with the park, to determine the benefit obtained through the park by taking tourists to the park, besides of identifying the type of tourists and services they provide, among others.
- ✓ **(5) Key Actors (SINAC and OET):** the shelter of SINAC and OET were interviewed in order to determine the services, collect information about visitors, incomes and expenses as well as details about seasons and management of SINAC. Besides, was interviewed another key actor related to other tourist activity that is performed around the park.
- ✓ **(6) Hotels and Cabins and (9) Restaurants and Coffee Bars** as part of the commercial and productive activities related to the park, surveys were applied to different hotels, cabins and restaurants, to determine the influence of the park on these activities and their development.
- ✓ **(7) Related Activities and (11) Haulers** as part of the commercial and productive activities linked to the park and activities that are performed inside the park, surveys will be applied to the different haulers of boats and veterinary surgeries, in order to determine the influence of the park on these activities and their development.

### **3. Fieldwork**

**Second Trip** from August 5<sup>th</sup> to August 9<sup>th</sup>, 2009.

The objectives of this visit correspond to:

- ✓ To interview the stockbreeding sector that is in the park given that is the only national park in the country that meets such characteristic.
- ✓ To obtain information about the park and visitation of it.
- ✓ To apply a survey to the post of SINAC and OET.
- ✓ To leave the surveys for tourists, Researchers, Professors and Students, in the post of SINAC and OET.
- ✓ During the trip to the park was achieved to gather information both in the park and with people from the municipality of Bagaces. In the same way, to apply some surveys to tourists, researchers and professors. Besides of the delivering of the surveys to the staff of the OET and SINAC.

It was not possible to interview all the stockbreeders of the place. But given the applied surveys, we can make a preliminary overview of this activity and its development in Palo Verde National Park.

The number of surveys applied was of: 2 for tourists, 1 for professors, 2 for researchers, 4 for stockbreeding concessions and 1 for the shelter of SINAC, in total 10 surveys.

***Instruments applied during the fieldwork***  
***From August 5<sup>th</sup> to August 8<sup>th</sup>, 2009***

<i>Surveys / Interviews</i>	<i>Number of surveys applied</i>
<b><i>Surveys</i></b>	
<i>Tourists</i>	2
<i>English</i>	0
<i>Spanish</i>	2
<i>Professors</i>	1
<i>Researchers</i>	2
<i>Stockbreeding concessionaria</i>	4
<b><i>Interviews</i></b>	
<i>Key Actors (OET and SINAC)</i>	2
<i>Travel Agencies</i>	8
<i>Staff from the Municipality of Bagaces</i>	1

*Source:* Own elaboration.

**Third Trip** *from December 7<sup>th</sup> to December 9<sup>th</sup>, 2009.*

The objectives of this visit correspond to:

- ✓ To finish interviewing the stockbreeding sector that is in the park, given that is the only national park that in the country meets with such characteristic.
- ✓ To get more information about the park and to survey productive activities developed in Bagaces, which have any relation to the park like Hotels and veterinary surgeries.
- ✓ To apply surveys to the owners of Boats in Bolsón and Puerto Humo used by the park for Tours on the Tempisque River.
- ✓ To collect the surveys of Tourists, Researchers, Professors and Students, which were left in the shelter of SINAC and OET.

During the trip to the park was achieved to survey some productive activities of Bagaces, besides of interviewing to concessionaire stockbreeders and those who make the tours by boat in Palo Verde. Likewise, was collected more information about the park, and related activities, as well as the importance of the Park for the development of communities like Bolsón.

The number of surveys applied and collected was of: 2 for tourists, 14 to professors, 4 for researchers, 93 for students, 4 for stockbreeding concessions, 1 for key actors, restaurants and related activities, 2 for transportation and Hotels, in total 124 surveys.

***Instruments applied during the fieldwork  
 From December 7<sup>th</sup> to December 9<sup>th</sup>, 2009***

<i>Surveys / Interviews</i>	<i>Number of Surveys Applied</i>
<b><i>Surveys</i></b>	
<i>Tourists</i>	2
<i>English</i>	1
<i>Spanish</i>	1
<i>Professors</i>	14
<i>Researchers</i>	4
<i>Students</i>	93
<i>Stockbreeding concessions</i>	4
<i>Haulers</i>	4
<i>Hotels</i>	3
<i>Restaurant</i>	1
<i>Related Activities</i>	1
<b><i>Interviews</i></b>	
<i>Key Actors (Luis Roberto Clachar)</i>	1
<i>Staff from SINAC - ACT Bolsón</i>	1

*Source:* Own elaboration.

**Fourth Trip** from February 22<sup>nd</sup> to February 23<sup>rd</sup>, 2010.

The objectives of this visit correspond to:

- ✓ To get more information about the park and to Survey productive activities which are developed in Bagaces that have any relation to the park, such as supermarkets, butcher's shop, restaurants, among others.
- ✓ To collect the surveys for Tourists, Researchers, Professors and Students, which were left in the post of SINAC and OET.

During the trip to the park was achieved to survey some productive activities in Bagaces, besides of collecting the surveys left in OET and SINAC, and to gather information about the park and related activities.

The number of surveys applied and collected was of: 56 for tourists, 30 for professors, 24 for researchers, 30 for students, restaurants 1 and related activities 4, in total 145 surveys.

***Instruments applied in total***  
***From August 5<sup>th</sup>, 2009 to February 23<sup>rd</sup>, 2010***

<i>Surveys / Interviews</i>	<i>Number of Surveys Applied</i>
<b><i>Surveys</i></b>	
<i>Tourists</i>	60
<i>Professors</i>	45
<i>Researchers</i>	30
<i>Students</i>	123
<i>Stockbreeding concessions</i>	8
<i>Travel agencies</i>	8
<i>Haulers</i>	6
<i>Hotels</i>	3
<i>Restaurant</i>	2
<i>Related Activities</i>	5
<i>Key Actors</i>	3
<b><i>Interviews</i></b>	
<i>Staff from the Municipality of Bagaces</i>	1
<i>Staff from SINAC - ACT Bolsón</i>	1

*Source:* Own elaboration.

**Fifth Trip** from May 19<sup>th</sup>, 2010.

The objectives of this visit correspond to:

- ✓ To collect the surveys applied and blank surveys for Tourists, Researchers, Professors and Students, which were left in the post of SINAC and OET.
- ✓ To take pictures of the lagoon.

During the trip to the park was achieved to pick up the surveys from SINAC and OET. Besides, we could take pictures of the lagoon with more water mirrors.

***Instruments applied in total to  
May 19<sup>th</sup>, 2010.***

<i>Surveys /Interviews</i>	<i>Number of Surveys Applied</i>
<i>Surveys</i>	
<i>Tourists</i>	6
<i>Researchers</i>	3
<i>Students</i>	3

*Source:* Own elaboration.

#### ***4. Design of the Database***

The tabulation of the interviews was made through the Microsoft Excel Program. For each question and answer, was assigned a coding; and the questions were closed with the most general answers. Besides, each document has a sheet with the assigned coding and another one with the record of the exchange rate used.

For the surveys the information was divided into three groups. In the case of *tourists*, the first one includes the general information of the tourist, what other places is he/she going to visit, how does he/she arrive to the country, what did he like from the park, among others. The second part refers to the expenses incurred during the visit in the country and the park in the case of foreigners and national tourists to get to the park. The third one includes the opinion of the visitors respect to the management carried out in the park and how this can be improved.

For the surveys of *Researchers, Professors and Students*, as well as for tourists, are divided into three parts. The first part includes the general information of the visitors, the organization he/she comes from and the type of work he/she carries out. The second one includes the economic section that refers to the expenses associated with the job performance. Meanwhile, the third one contains what refers to the policy management, that is, the opinion of the visitors respect to MINAET-SINAC and the improvements that should be carried out in the park.

The surveys for *Restaurants, Carriers and Related Activities*, as well as the previous ones are divided into three. The first part includes the information about the commercial and productive activity, suppliers; the second one includes the incomes and expenses of the activity and the third one, the part of political and environmental management, that is, everything related to the work done in the park and its surroundings, among others.

The information of the surveys for *Hotels* is divided into 4, the first one just like the other instruments includes the information of the hotel, as well as of suppliers, employees, among others; the second one determines the incomes that the hotel has, either in the quality of lodging, or activities that offers and service of restaurant if it has it; in the third one are found the expenses incurred due to the services it provides; and the fourth one has the information about political and environmental management.

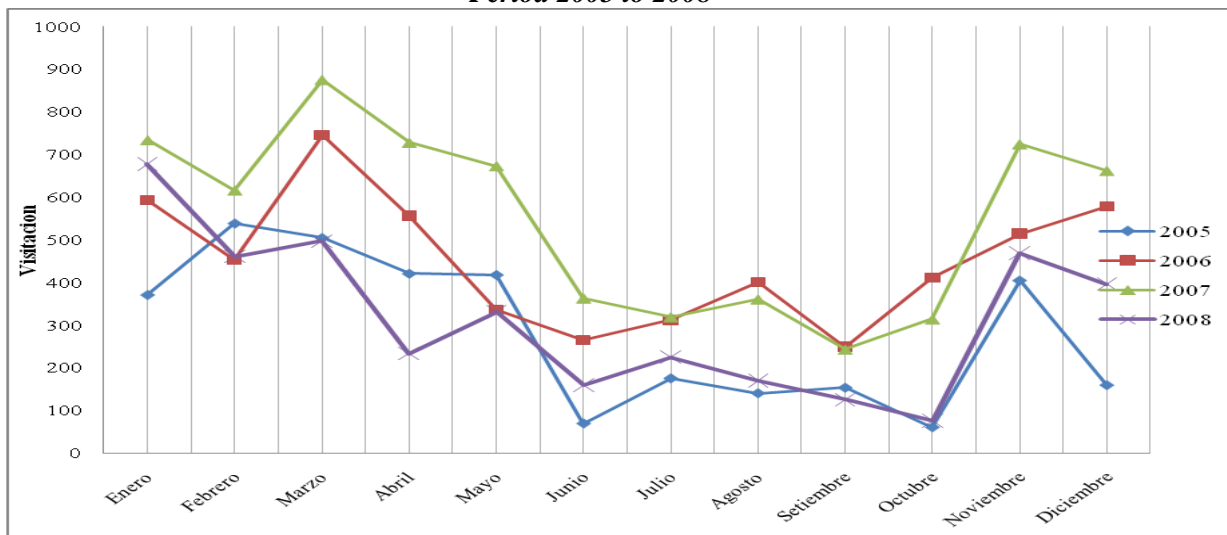
Regarding the surveys for *Stockbreeders* the information is divided into 4 sections. The first one, like the other instruments includes the general information in this case of stockbreeders and its concession. The second one determines the information about the stockbreeding activity and its development inside the park. Meanwhile, in the third one are found the expenses in which he/she incurred to maintain the cattle, as well as the products that he/she sells and the investments generated. The fourth one has the information of political management.

With respect to *Travel Agencies*, the survey applied was also divided into 4 parts. The first one contains information of the agency and the services they offer. The second one includes the incomes perceived, as well as its relation with Palo Verde National Park. The third part evidences the expenses that involve the provision of services. Meanwhile, the fourth one presents the information of political and environmental management.

## 5. Determination of the Sample

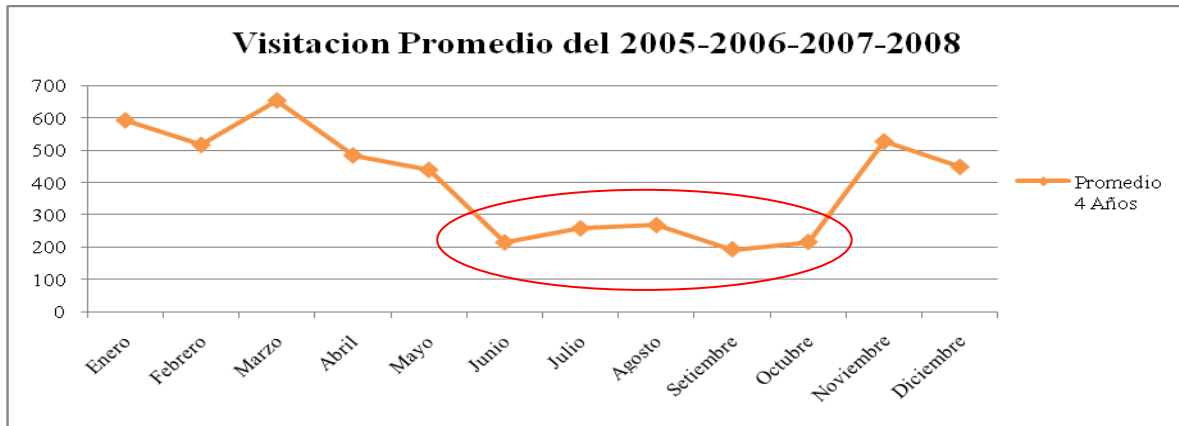
To determine the sample was taken as reference the average total visitation from 2005, 2006, 2007 and 2008 of Palo Verde National Park. As it is presented in the following graph:

*Monthly visitation of Palo Verde National Park  
-Period 2005 to 2008-*



*Source:* Own elaboration, according to the information provided by the Manager's Office of Protected Wildlife Areas

As it is observed in the previous graph, the highest visitation during the year is between November and May. Meanwhile, from June to October this flow decreases; averaging the four years is appreciated this situation, as shown in the following graph:



*Source:* Own elaboration, according to the information provided by the Manager’s Office of Protected Wildlife Areas

For the calculation of the sample size, which is one of the aspects to concrete in the previous phases of the research, and it determines the degree of credibility attached to the results obtained. To this end, the following formula of finite population size is used:

$$n = Z_{\alpha}^2 \frac{N \cdot p \cdot q}{i^2 (N - 1) + Z_{\alpha}^2 \cdot p \cdot q}$$

**Where:**

- $n$  = It is the simple size (number of surveys that will be applied).
- $N$  = It is the population or universe size (total number of possible interviewees).
- $\alpha$  = Significance level of 5%
- $Z_{\alpha/2}$  = Value corresponding to the distribution of Gauss of 1,960, it depends on the level of confidence that is assigned.
- $1-\alpha$  = Confidence level of 95%
- $p$  = Expected prevalence of the visitation to the park, is the proportion of individuals that has in the population the characteristic of study. (This datum is generally unknown and it is often assumed that  $p=q=0.5$  which is the safest option.).
- $q$  =  $1-p$ , it is the proportion of individuals who do not have that characteristic.
- $i$  = Error that is expected to commit is of 5%. The sampling error is the difference that exists between the results that we get by asking for a sample of the population and the one we would get if we would ask to the total of it.

For purposes of obtaining a sample calculation for Palo Verde National Park it is taken the average of total visitation for 2005, 2006, 2007 and 2008 respectively in the following way:



$$p = \frac{3,415_{2005} + 5,412_{2006} + 6,612_{2007} + 3,819_{2008}}{4}$$

$$p = 4,815$$

**Average Population of Palo Verde National Park:** 4.815 visitors in total.

$$n = 1.960^2 \frac{4,815 \times 0.5 \times 0.5}{0.05^2(4,815 - 1) + 1.960^2 \times 0.5 \times 0.5}$$

$$n = 356$$

For Palo Verde National Park, the sample size is of 356 visitors in total, to a significance level of 5%. This represents the minimum sample size of visitors to survey in the park.

Since this park is very visited by tourists, researchers, students and professors, the sample was divided into these groups, to obtain an acceptable degree of credibility to the results obtained as follows:

**Number of estimate surveys per group of visitation**

<i>Group</i>	<i>Percentage</i>	<i>Sample</i>	<i>Sub-sample</i>
<i>Education</i>	73%	258	<div style="display: flex; align-items: center;"> <span style="font-size: 2em; margin-right: 5px;">}</span> <span>129 Students</span> </div> <div style="display: flex; align-items: center;"> <span style="font-size: 2em; margin-right: 5px;">}</span> <span>129 Professors</span> </div>
<i>Researchers</i>	8%	30	
<i>Tourists</i>	19%	68	
<b><i>TOTAL</i></b>	<b><i>100%</i></b>	<b><i>356</i></b>	

*Source:* Own elaboration, according to the information of the OET.

According to the previous chart, for the educational part is estimated to apply 258 surveys distributed among students and professors in the same magnitude. This is because it is unknown what percentage of visitation corresponds to each one of them. Given that in certain cases groups of students are bigger than the number of professors and taking into account the professors that make individual works. The rest of the sample is divided among 30 surveys for researchers and 68 for tourists of the park respectively.

## ANNEX 2 VALIDATION WORKSHOP OF PRELIMINARY RESULTS

### Validation workshop: Palo Verde National Park

Date: March 25<sup>th</sup>, 2010

Place: OET-Palo Verde National Park

Start hour: 8.30 a.m.

Finish hour: 12:30 p.m.

### Participants:

MSc. Mary Luz Moreno Díaz

MSc. Fiorella Salas Pinel

Bach. Silvia González Brenes

Bach. Carlos Mora Salas

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### AGENDA:

- Bridge of access: SOUTHEAST OF BAGACES, 19804 hectares.
- Hill of biggest height is between 220 and 233 meters height. None reaches 300 meters.
- Activities that do not depend on the national park, which are there or not, but that they do have a positive or negative impact due to the existence of the park.
- Why San José at national level and not at regional level? Puntarenas and Limón as ports (It is being evaluated if they can be placed at national or regional level). If it is far away, it should be national.
- From 2009 up to now was an impact totally different, positively.
- Additional expenses: canon is included at local level as expense. Repairs on fences, medicines and cattle. They are total because there are people who just sale calves, others sale milk, meat and other products. There should be distribution of monthly and annual incomes.
- When it is raining (August and September) the stockbreeders do not have any kind of income. In fact, it is more difficult for them, since the cattle drown, so that they have loss of investment.



PHOTO: Fiorella Salas, 2010

- There is confusion about if the canon is an investment or an income. It is a distribution that they do, what is intended to do is a distribution of incomes.
- It is a little bit worthy the distribution. We want to know which were the criteria used for obtaining a datum. And then get the percentage with respect to the activities related with the national park.
- Boatmen: What percentage at local level was taken into account to know what they promote about the park?
- Each boat has an owner; each office should have someone who provides the information.
- As an administrator of a restaurant is very difficult that there is no information or spreading. In the area of the restaurant is very low the income that is obtained.
- Regarding the threats, to carry out research Works by the State about the studies of environmental impacts inside the park. To carry out a study of impact outside Bolsón and take into account the impact towards the communities. The workshop guests think that people who dredge up and down carry out a ridiculous work. Why do not they do it down and up? The same State must include this aspect as a threat for them.
- Representatives from MINAET if they have claimed against what happens in Bolsón. They have been working more with the area of Tempisque regarding the problems related with the bridge. When there are decrees of emergency, they do not want to take the studies of environmental impact. With this, the problem is moving; the effects will be more harmful with respect to the topic of the tides.
- Boatmen: Bebedero. They sail on the old port paying 6 dollars. Regarding the economic figures is very low what the national park is providing at level of all the scales. In the ASPs, there is a contribution that has not been typified yet. Water will be very important to take into account for case studies.
- To invite the associations of development so that they can promote much more tourism in the communities surrounding Palo Verde National Park.

**ANNEX 3.**  
**INSTRUMENTS APPLIED IN THE FIELDWORK CARRIED OUT IN PALO VERDE NATIONAL PARK**



No. Survey	Interviewer code

**Interviews for local actors in Palo Verde National Park**  
**Project “Systematization and analysis of the contribution of National Parks and Biological Reserves to the economic and social development in Costa Rica”**

The National University is carrying out a research project which its objective is to quantify the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Date: \_\_\_\_\_  
 Place: \_\_\_\_\_  
 Position: \_\_\_\_\_

1. What kind of socio-economic and environmental changes have happened in the local or communal level through the development of tourism in the Palo Verde National Park?  
 \_\_\_\_\_  
 \_\_\_\_\_
2. What productive activities have grown rapidly and which ones have been disappearing?  
 \_\_\_\_\_  
 \_\_\_\_\_
3. In your opinion, what are the benefits and negative effects arising from the presence of Palo Verde National Park to the socio-economic development?  
 \_\_\_\_\_  
 \_\_\_\_\_
4. What has been the development of infrastructure associated with the creation of Palo Verde National Park?  
 \_\_\_\_\_  
 \_\_\_\_\_
5. Does tourist activity related to Palo Verde National Park generate enough jobs for the people to stay working in the community or should they emigrate?  
 \_\_\_\_\_  
 \_\_\_\_\_
6. According to your experience, how do you qualify the management that SINAC carries out in Palo Verde National Park? What actions could be applied to improve the current management?  
 \_\_\_\_\_  
 \_\_\_\_\_
7. Observations



No. Survey	Interviewer code

**Interviews for Supermarkets, Workshops, excursions, and other related tourist activities Palo Verde National Park**

**Project “Systematization and analysis of the contribution of the national parks and biological reserves to the economic and social development in Costa Rica”**

The National University is carrying out a research project which its objective is to quantify the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Date: \_\_\_\_\_

Place: \_\_\_\_\_

Type of establishment:

Supermarket \_\_\_\_\_ Travel agency \_\_\_\_\_ Tour operator \_\_\_\_\_

Name of the enterprise: \_\_\_\_\_

Name of The interviewee: \_\_\_\_\_

Position of the interviewee: \_\_\_\_\_

**1. General Questions**

1. How long do you offer the service?

\_\_\_\_\_

\_\_\_\_\_

2. What did you do before working in the company?

\_\_\_\_\_

3. What types of services or products are offered by the enterprise?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Do you know what percentage of people are nationals and foreigners?

\_\_\_\_\_ Foreigners  
 \_\_\_\_\_ Nationals

**2. Questions about suppliers**

5. Where do the goods you use in your business come from?

\_\_\_\_\_

6. What kind of means of transportation do they use (boats, cars, trucks, etc) to bring and carry goods?  
 \_\_\_\_\_

7. Where did you buy the furniture and equipment you use in your local?  
 \_\_\_\_\_

**3. Fixed and operating costs**

8. Is the business own or rented?

Own \_\_\_\_\_

Rented \_\_\_\_\_ How much do you pay per month? \_\_\_\_\_

9. What is your monthly expenditure in terms of?

Item	Monthly Cost
Electricity	
Water	
Telephone	
Internet	
Cable TV	
Cleaning	
Maintenance	
Other services	

10. How many people work in the enterprise each season? (including yourself)

	High Season	Low Season
Relatives		
Employees		

11. How much do you pay for wages monthly?  
 \_\_\_\_\_

**4. Incomes**

12. Do you live only of this activity or do you have other sources of income?

YES: \_\_\_\_\_ NO: \_\_\_\_\_

Which one? \_\_\_\_\_

13. What percentage of your income comes from tourism?  
 \_\_\_\_\_

14. How much raises the monthly / annual sales that are carried out in the following seasons?

	Low Season	High Season
Monthly		
Annual		

15. What percentage of your sales is made to visitors of Palo Verde National Park?  
 \_\_\_\_\_

**5. Investment**

16. Are you planning on expanding the capacity of the business (to build more or to offer more services) \_\_NO / YES\_\_ what services will you expand?  
 \_\_\_\_\_

17. How much money have you invested in your business so far?  
 \_\_\_\_\_

18. Where does the water you use come from?

\_\_\_\_\_ Concession (Well) \_\_\_\_\_ Aqueduct Other \_\_\_\_\_

19. Do you have a treatment plant for sewage? YES \_\_\_\_\_ NO \_\_\_\_\_

20. How do you manage the solid wastes (garbage)?  
 \_\_\_\_\_

21. Do you practice the separation and recycling of wastes? YES \_\_\_\_\_ NO \_\_\_\_\_  
 \_\_\_\_\_

22. Do you have any certification? YES \_\_\_\_\_ NO \_\_\_\_\_ which one?  
 \_\_\_\_\_

**6. Organization and relationship with the Park**

23. Is the enterprise a member of a communal, commercial, tourism association (at national or regional level)?

YES \_\_\_\_\_ NO \_\_\_\_\_ which one? \_\_\_\_\_

24. In your opinion: Would you be in favor of an increase in tourism towards the park? Yes \_\_\_\_\_ No \_\_\_\_\_ Why? \_\_\_\_\_

25. In your opinion: What can be done to promote and sustain tourism towards the National Park?  
 \_\_\_\_\_  
 \_\_\_\_\_

26. Do you agree with the management being undertaken by MINAE in the park? \_\_YES / NO\_\_ Why?  
 \_\_\_\_\_



No. Survey	Interviewer code

**Interviews for Restaurants and Coffee Bars  
Palo Verde National Park**

**Project “Systematization and analysis of the contribution of the national parks and biological reserves to the economic and social development in Costa Rica”**

The National University is carrying out a research project which its objective is to quantify the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Date: \_\_\_\_\_

Place: \_\_\_\_\_

Type of establishment: Restaurant \_\_\_\_\_ Coffee Bar \_\_\_\_\_ Other Specify \_\_\_\_\_

Name of the enterprise: \_\_\_\_\_

Name of the interviewee: \_\_\_\_\_

Position of the interviewee: \_\_\_\_\_

1. Who is the owner of the business? Where is he/she from?

\_\_\_\_\_

2. When did the restaurant/coffee bar come into operation?

\_\_\_\_\_

3. The restaurant/coffee bar is:

Owned

Rented. How much do you pay per month?

\_\_\_\_\_

4. Do you know who built the restaurant/coffee bar?

\_\_\_\_\_

5. What was the use of the land before the construction of the restaurant (grass, forest)?

\_\_\_\_\_

6. Is the land still used for that purpose? YES \_\_\_ / NO \_\_\_

7. How do you promote the restaurant/coffee bar?

\_\_\_\_\_

8. Does your restaurant/coffee bar have website? \_\_\_\_\_ YES \_\_\_\_\_ NO

Electronic address \_\_\_\_\_



9. What is the price charged for the dish of the day? (Include the types of food).

\_\_\_ Breakfast \_\_\_\_\_  
 \_\_\_ Lunch \_\_\_\_\_  
 \_\_\_ Dinner \_\_\_\_\_

10. How many dishes do you sell in each season?

High Season \_\_\_\_\_ Low Season \_\_\_\_\_

11. How many tourists do you attend daily/monthly in your restaurant/coffee bar?

	Low Season	High Season
Daily		
Monthly		

12. Is there any time of the year in which the visitation is minimal?

\_\_\_ YES \_\_\_ NO

Which months? \_\_\_\_\_

13. Have you been able to notice differences in the visitation rate of restaurant/coffee bar in recent years?

\_\_\_ YES / \_\_\_ NO

Explain \_\_\_\_\_

14. Has the current economic crisis affected the demand for the services your restaurant/coffee bar offers?

YES \_\_\_\_\_ NO \_\_\_\_\_

Explain \_\_\_\_\_

15. Do you know what percentages of your customers are from the country and foreigners?

	Low Season	High Season
National:		
Foreigners:		

16. What means of transportation use the tourists to get to the hotel/cabin?

Bus \_\_\_\_\_

Car (own \_\_\_\_\_ rented \_\_\_\_\_)

Other means Specify \_\_\_\_\_

17. In your opinion, what percentage of customers are attracted by:

\_\_\_\_\_ Rincón de la Vieja Volcano National Park

\_\_\_\_\_ Other attractions. Specify \_\_\_\_\_

18. Do you have any idea of what percentage of your incomes depends on the Palo Verde National Park?

\_\_\_\_\_

19. How much raises the monthly / annual sales that carry out the restaurant in the following seasons?

	Low season	High season
Monthly		
Annual		

20. What is the operation and maintenance cost of the restaurant/coffee bar (during the season)?

Low Season	High Season

21. Are you planning on expanding the capacity of the restaurant/coffee bar (to build more or to offer more services) \_\_NO / YES\_\_

What services will you expand?

\_\_\_\_\_

22. How many people work in the restaurant/coffee bar in each season? (including yourself)

	High Season	Low Season
Relatives		
Employees		

23. How much do you pay for wages monthly?

\_\_\_\_\_

24. Where do the employees come from?

Bagaces

Liberia

Puerto Humo

Bagatzi

San Ramón

Playitas

Other, which one? \_\_\_\_\_

25. What is your monthly expenditure in terms of?

Item	Monthly Cost
Food	
Beverages	
Water	
Electricity	
Internet	
Telephone	
Cable TV	
Other services	

26. Where did you buy the furniture and equipment you use in your restaurant/coffee bar?

\_\_\_\_\_

27. Where do you buy the inputs used by the restaurant/coffee bar?

\_\_\_\_\_

28. How much money have you invested in your business so far?

General description

\_\_\_\_\_  
\_\_\_\_\_

29. Do you collaborate, or have any relationship with any company or organization at the local, national or international level? \_\_\_YES / NO \_\_\_

\_\_\_ Ministry of Tourism (ICT)

\_\_\_ Business Chamber

\_\_\_ Operator Tour

\_\_\_ Travel agency

\_\_\_ Others, Which ones: \_\_\_\_\_

30. Where does the water you use for your restaurant/coffee bar come from?

\_\_\_\_\_ Concession (Well)    \_\_\_\_\_ Aqueduct    Other \_\_\_\_\_

31. Do you have a treatment plant for sewage? YES \_\_\_\_\_ NO \_\_\_\_\_

32. How do you manage the solid wastes (garbage)?

\_\_\_\_\_

33. Do you practice the separation and recycling of wastes? YES \_\_\_\_\_ NO \_\_\_\_\_

\_\_\_\_\_

34. Do you have any certification? YES \_\_\_\_\_ NO \_\_\_\_\_ which one?

\_\_\_\_\_

35. Do you agree with the management being undertaken by MINAE in Palo Verde National Park?

\_\_\_YES / NO\_\_\_ Why? \_\_\_\_\_

36. Are you supporting financially or in a different way the maintenance of a protected area?

\_\_\_YES, How? \_\_\_\_\_

\_\_\_NO, would you be willing to do it in the future? \_\_\_\_\_

\_\_\_\_\_



No. Survey	Interviewer Code

**Survey for hotels / cabins / camping zone /house renting  
Palo Verde National Park**

**Project “Systematization and analysis of the contribution of National Parks and Biological Reserves to the economic and social development in Costa Rica”**

At the National University we are carrying out a research project which its objective is to quantify the contributions of national parks to the socioeconomic development in Costa Rica. In this sense, we need your cooperation to complete the following questionnaire. All information gathered will be used only for academic purposes.

Date: \_\_\_\_\_

Place: \_\_\_\_\_

Type of accommodation (hotel / cabins / camping zone /renting (house): \_\_\_\_\_

Enterprise name / brand name: \_\_\_\_\_

Interviewee name: \_\_\_\_\_

Position of the interviewee: \_\_\_\_\_

1. Who is / are the owner (s) of the business? Where is he /are they from?  
 \_\_\_\_\_

2. When was the hotel/cabin opened to the public?  
 \_\_\_\_\_

3. Do you own the hotel/cabin or are they rented?

\_\_\_ Owned

\_\_\_ Rented. How much do you pay per month? \_\_\_\_\_

4. Do you know who built the hotel /cabins?  
 \_\_\_\_\_

5. Where did you buy the furniture (tables, chairs, etc.)? \_\_\_\_\_

6. What was the usage of the land before the construction of the hotel /cabin (grassland, forest)?  
 \_\_\_\_\_

7. ¿Is the land still used for that purpose? YES \_\_\_ / NO \_\_\_

8. What is the most important use for your current income? \_\_\_\_\_

9. How many tourists stay monthly in your hotel / cabin?

High Season \_\_\_\_\_

Low Season \_\_\_\_\_

10. The segment of the market that serves the hotel / cabin relates to:

Massive Tourism \_\_\_\_\_ Adventure Tourism \_\_\_\_\_ Ecotourism \_\_\_\_\_  
Cruise Tourism \_\_\_\_\_ Health Tourism \_\_\_\_\_ Communal Rural Tourism \_\_\_\_\_

11. How many of your customers are from the country? \_\_\_\_\_ and foreigners? \_\_\_\_\_

12. What means of transportation use the tourists?  
\_\_\_\_\_

13. How do you promote this place? \_\_\_\_\_

14. Does your hotel / cabin bar have website? \_\_\_\_\_ YES \_\_\_\_\_ NO

Address \_\_\_\_\_

15. In your opinion, what percentage of your customers is attracted by the park?

i. The park only \_\_\_\_\_

ii. Another attractions \_\_\_\_\_ which ones (specify): \_\_\_\_\_

16. Do you collaborate, or has any relationship with any company or organization at the local, national or international level? \_\_\_ YES / NO \_\_\_

\_\_\_ Ministry of Tourism (ICT)

\_\_\_ Chamber

\_\_\_ Operator Tour

\_\_\_ Travel agency

\_\_\_ Others, Which ones: \_\_\_\_\_

17. What is the price charged for the dish of the day? (Must include the types of food)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

18. How many dishes do you sell in each season?

High Season \_\_\_\_\_ Low Season \_\_\_\_\_

19. Which is the occupancy rate in each season?

Low Season \_\_\_\_\_

High Season \_\_\_\_\_

20. Is there any time of the year in which the visitation is minimal? \_\_\_ YES \_\_\_ NO

How much time? \_\_\_\_\_

21. Have you been able to notice differences in the visitation rate to in recent years?

\_\_\_ YES / \_\_\_ NO Explain \_\_\_\_\_

**Analysis of the contributions of National Parks and Biological Reserves to the socio-economic development of Costa Rica.**  
**Case Study: Palo Verde National Park**

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22. Has the current economic crisis affected the demand for the services your restaurant/coffee bar offers?  
YES \_\_\_\_\_ NO \_\_\_\_\_ Explain \_\_\_\_\_

23. Approximately, how much do you receive as yearly income (before benefits) for the food service?

NA \_\_\_\_\_, then, do you have any idea of your monthly income (before benefits) for each season?

High: \_\_\_\_\_

Low: \_\_\_\_\_

24. Do you have any idea of what percentage of your revenues depend on the national park?

\_\_\_\_\_

25. Are you planning on expanding the capacity of this place (i.e. build more places or offer more services) \_\_\_YES / \_\_\_NO\_\_\_ which ones? \_\_\_\_\_

26. Do your hotel / cabin have restaurant service? \_\_\_No / Yes\_\_\_, are you owner \_\_\_YES / \_\_\_NO, if it is rented, How much do you pay for the renting: \_\_\_\_\_

27. How much do sales of the restaurant per year amount to?

\_\_\_\_\_

28. Do you have any idea of how many guests use the restaurant services?

\_\_\_No / \_\_\_Yes, how many?

\_\_\_\_\_

29. Do you have any idea of how many people who are not guests use the restaurant service?

\_\_\_\_\_

30. How much money has been invested in your business until nowadays?

\_\_\_\_\_

General Description \_\_\_\_\_

31. What is the operation and maintenance cost of the hotel / cabin (during the season)?

\_\_\_\_\_

32. How many people work in this place on each season?

High: Relatives \_\_\_\_\_ Employees \_\_\_\_\_

Low: Relatives \_\_\_\_\_ Employees \_\_\_\_\_

33. How much do you pay for wages (weekly/monthly)?

\_\_\_\_\_

34. Where do the employees come from?

\_\_\_\_\_ Bagaces

\_\_\_\_\_ Liberia

\_\_\_\_\_ Puerto Humo

\_\_\_\_\_ Bagaitzí

\_\_\_\_\_ San Ramón

\_\_\_\_\_ Playitas

\_\_\_\_\_ Other Which one?

35. How much do you spend in?

- i. Food \_\_\_\_\_
- ii. Beverages \_\_\_\_\_
- iii. Bottled water \_\_\_\_\_
- iv. Electricity consumption \_\_\_\_\_
- v. Internet \_\_\_\_\_
- vi. Telephone \_\_\_\_\_
- vii. Cable TV \_\_\_\_\_
- viii. Other services \_\_\_\_\_

36. Where do you buy these groceries? \_\_\_\_\_

37. Are you supporting financially or in a different way the maintenance of a protected area?

\_\_YES, How? \_\_\_\_\_

\_\_NO, would you be willing to do it in the future? \_\_\_\_\_

38. Do you agree with the management being undertaken by the MINAE in the park? \_\_YES / NO\_\_ why?

\_\_\_\_\_

39. What other services does your hotel provides to tourists?

Service	Fee
Walk to the main crater	
Hot Springs to swim	
1. Viewpoints	
2. Walks	
3. Deep holes to swim (Santa María)	
4. Waterfalls	
Others	

40. Where does the water you use for your restaurant/coffee bar come from?

\_\_\_\_\_ Concession (Well) \_\_\_\_\_ Aqueduct Other \_\_\_\_\_

41. Do you have a treatment plant for sewage water? YES \_\_\_\_\_ NO \_\_\_\_\_

42. How do you manage the solid wastes (garbage)?

\_\_\_\_\_

43. Do you practice the separation and recycling of wastes? YES \_\_\_\_\_ NO \_\_\_\_\_

\_\_\_\_\_

44. Do you have any certification? YES \_\_\_\_\_ NO \_\_\_\_\_ Which one? \_\_\_\_\_



No. Survey	Interviewer code (a)

**Interviews for Travel Agencies. Palo Verde National Park**  
**Project “Systematization and analysis of the contribution of National Parks and Biological Reserves to the economic and social development in Costa Rica”**

The National University is carrying out a research project which its objective is to quantify the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Date: \_\_\_\_\_

Place: \_\_\_\_\_

Name of the enterprise (optional):

\_\_\_\_\_

Name of the interviewed person (optional):

\_\_\_\_\_

Position of the interviewed person (optional):

\_\_\_\_\_

**1. General Questions**

1. How long do you offer the service?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

2. How do you promote your enterprise?

Internet: \_\_\_\_\_

Contact abroad: \_\_\_\_\_ ¿Who? \_\_\_\_\_

Contact in the country: \_\_\_\_\_ ¿Who? \_\_\_\_\_

Others: \_\_\_\_\_

3. What type of services or products is offered by the enterprise?

\_\_\_\_\_  
 \_\_\_\_\_

4. How many tourists take your agency to Palo Verde National Park?

High Season: \_\_\_\_\_

Low Season: \_\_\_\_\_

5. How many tourists are foreigners and how many tourists are nationals?

Foreigners: \_\_\_\_\_

Nationals: \_\_\_\_\_



6. What percentage of your sales is related to the Palo Verde National Park?

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7. How often do you take visitors to Palo Verde National Park?

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How many tourists do you take per trip? \_\_\_\_\_

**2. Questions about providers**

8. What input is required to provide transportation service?

Input	Who provide it to you	How much is it

9. Where did you buy the furniture and equipment you use in your local?

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**3. Fixed and operating costs**

10. Is your own local or is it rented?

Own: \_\_\_\_\_

Rented: \_\_\_\_\_ How much do you pay per month? \_\_\_\_\_

11. What is your monthly expenditure in terms of?

Item	Monthly cost
Electricity	
Water	
Telephone	
Internet	
Cable TV	
Cleaning	
Maintenance	
Other services	

12. How many people work in the enterprise each season? (Including yourself)

	Low Season	High Season
Relatives		
Employees		

13. How much is the amount you pay for monthly wages?

---

**4. Incomes**

14. Do you live only of this activity or do you have some other sources of income?

Yes: \_\_\_\_\_ No: \_\_\_\_\_

Which one? \_\_\_\_\_

15. What percentage of your income comes from tourism? \_\_\_\_\_

16. How much raises the monthly/annual sales that carry out the restaurant in the following seasons?

	Low Season	High Season
Monthly		
Annual		

17. What percentage of your sales is made to visitors of Palo Verde National Park?

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18. How the financial crisis has affected your sales?

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**5. Investment**

19. Are planning on expanding the capacity of the local (to build more or to offer more services) No \_\_\_\_\_

Yes \_\_\_\_\_ which ones? \_\_\_\_\_

20. How much money has you invested in your business till today? \_\_\_\_\_

**6. Environmental Management**

21. Where does the water come from?

Concession (well): \_\_\_\_\_

Aqueduct: \_\_\_\_\_

Other: \_\_\_\_\_

22. Do you have a treatment plant for sewage water? YES \_\_\_\_\_ NO \_\_\_\_\_

23. How do you manage the solid wastes (garbage)? \_\_\_\_\_

24. Do you practice the separation and recycling of wastes? YES: \_\_\_\_\_ NO: \_\_\_\_\_

25. Do you have any certification? Si: \_\_\_\_\_ No: \_\_\_\_\_ Which one? \_\_\_\_\_

**7. Organization and relationship with the Palo Verde National Park**

26. Does the enterprise is a member of a community, commercial, tourist association (at a national or regional level)?

NO \_\_\_\_\_

YES \_\_\_\_\_ which one? \_\_\_\_\_

27. In your opinion, would you be in favor of an increase in tourism to the park?

Yes \_\_\_\_\_

No \_\_\_\_\_

Why? \_\_\_\_\_

28. In your opinion: What can be done to promote and keep tourism towards Palo Verde National Park?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

29. Do you agree with the management that MINAE carries out in the park? \_\_ Yes / No \_\_, Why?

\_\_\_\_\_  
\_\_\_\_\_

30. Would you agree to cooperate in the management of the Palo Verde National Park?

How? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



No. encuesta	Código encuestador (a)

**Interview Transportation Service  
Palo Verde National Park**

**Project “Systematization and analysis of the contribution of National Parks and Biological Reserves to the economic and social development in Costa Rica”**

In the Universidad Nacional we are carrying out a research Project, which its objective is to estimate the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Sate: \_\_\_\_\_

Place: \_\_\_\_\_

Name of the enterprise: \_\_\_\_\_

Name of the interviewee: \_\_\_\_\_

Position of the interviewee: \_\_\_\_\_

**General Questions**

1. Which is the type of transportation you offer?

Land transportation: \_\_\_\_ Bus / \_\_\_\_ Taxi / \_\_\_\_ Truck

Water transportation: \_\_\_\_ Panga/ \_\_\_\_ Motorboat. Nº \_\_\_\_\_

2. Which is the capacity of the type of transportation you use?  
\_\_\_\_\_ (people)

3. Which is the price you charge per person to national and foreign people by the service you offer?

National \_\_\_\_\_  
Foreigners \_\_\_\_\_

4. Which is the percentage of national and foreign tourists who use the service in each season?

National \_\_\_\_\_  
Foreigners \_\_\_\_\_

5. On average how many trip do you do **per day** according to the season?

Low Season \_\_\_\_\_  
High Season \_\_\_\_\_

**Questions about Fixed, Operation Costs and Suppliers**

6. Is the means of transportation own or rented?  
 \_\_\_\_\_ Own  
 \_\_\_\_\_ Rented. How much do you pay per month? \_\_\_\_\_

7. Which is your monthly expense regarding?

Item	Monthly Cost
Electricity	
Water	
Telephone	
Internet	
Cable T.V.	
Cleaning	
Maintenance	
Salaries	
Fuel	
Other services	

8. Where did you buy the equipment you use?

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9. How many people work in the enterprise in each season? (including yourself)

	Low Season	High Season
Relatives		
Employees		

10. Which is the amount you pay in salaries monthly?

---

**Incomes**

11. Do you have another activity or source of incomes?

\_\_\_ Yes / \_\_\_ No. Which one? \_\_\_\_\_

12. What percentage of your incomes comes from tourism?

---

13. Annual income. \_\_\_\_\_ Monthly. \_\_\_\_\_

14. What percentage of your sales are made to visitors Palo Verde National Park? \_\_\_\_\_

---

**Investment**

15. Are you thinking of acquiring more equipment to provide more services?

\_\_\_ YES / NO \_\_\_ What will you buy? \_\_\_\_\_

16. How much does the investment made in your businesses amount up to now?

\_\_\_\_\_

**Organization and relation to the Park**

17. Do you have any certification?

\_\_\_ YES / NO \_\_\_. Which one? \_\_\_\_\_

18. Does the enterprise is part of any communal, commercial, tourist association (at national, regional, international level)?

\_\_\_ Yes / No \_\_\_. Which one? \_\_\_\_\_

19. In your opinion would you be in favor of an increase in tourism for the park? \_\_\_ Yes / No \_\_\_  
Why? \_\_\_\_\_

\_\_\_\_\_

20. In your opinion: What can be done to promote and maintain tourism for the National Park?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

21. Do you agree with the management that MINAET carry out in Palo Verde National Park?

\_\_\_ Yes/ No \_\_\_ why? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Thank you very much!!!



No. Survey	Interviewer code

**Interview for Concessionaires of Livestock Palo Verde National Park  
 Project “Systematization and analysis of the contributions of National Parks  
 and Biological Reserves to the economic and social development in Costa Rica”**

The National University is carrying out a research project which its objective is to quantify the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Date: \_\_\_\_\_

Place: \_\_\_\_\_

Name of the owner of the concession:  
 \_\_\_\_\_

**I. General Questions**

1. How many hectares does the livestock concession have? \_\_\_\_\_

2. How long ago do you have a livestock concession? \_\_\_\_\_

3. What did you do before working on livestock?  
 \_\_\_\_\_

4. What other economic activities do you carry out apart from livestock?  
 \_\_\_\_\_

5. What is the most important activity for your current income? \_\_\_\_\_

**II. Questions about the activity**

6. How many head of cattle do you have within Palo Verde National Park? \_\_\_\_\_

7. What type of livestock do you develop?  
 \_\_\_ Meat \_\_\_ Milk \_\_\_ Both

8. Where do the groceries you use in your business come from (food products, medicines, etc.)?  
 \_\_\_\_\_

9. What type of transportation do they use (boat, cars, trucks, etc.) to bring and carry these groceries?  
 \_\_\_\_\_

**III. Operation and fixed costs**

10. What is your monthly expense regarding?  
 \_\_\_\_\_

**Analysis of the contributions of National Parks and Biological Reserves to the socio-economic development of Costa Rica.**  
**Case Study: Palo Verde National Park**

Item	Monthly Cost
Payment of concession	
Water	
Food products	
Veterinarian	
Medicines	
Recruitment of laborers	
Other services	

11. Do you sell the cattle you maintain in PN?  YES To where? \_\_\_\_\_  NO

12. What type of products do you sell and which is the total income per product?

Product	Price per Kg. or other measure	Monthly Income
Meat		
Milk		
Others		

13. How often do you replace the cattle that inhabit in the National Park? \_\_\_\_\_

**IV. Investment**

14. Are planning on increasing the number of head of cattle of your concession?

YES /  NO  , how much?: \_\_\_\_\_

15. How much money have you approximately invested on your business up to date? \_\_\_\_\_

**V. Organization and relation with the Park**

16. Are you a member of a communal, commercial, livestock association (at national, regional, international level)?  YES which one? \_\_\_\_\_  NO

17. In your opinion, would you be in favor of an increase of livestock within the Park?

YES  No  why? \_\_\_\_\_

18. In your opinion, what can be done to promote and maintain the livestock and other type of activities in the National Park? \_\_\_\_\_

19. Do you know what the National System of Conservation Areas (SINAC) of Costa Rica is?

YES  Go to question 21  NO  Go to question 20

20. The administration of all protected wildlife areas are responsibility for the regulation of the Ministry of Environment, Energy and Telecommunications (MINAET), through the National System of Conservation Areas (SINAC). SINAC integrates the competences in forest,, wildlife and protected wildlife areas matters, its objective is to dictate policies, to plan and implement processes aimed at achieving sustainability in natural resources management of Costa Rica. Please continue with question 21.

21. Do you agree with the management that (SINAC) carries out in Palo Verde National Park?  YES /  NO  why? \_\_\_\_\_

22. In your opinion, which are the main threats that productive activities represent for the National Park?  
 \_\_\_\_\_





No. Survey	Interviewer code

**Interviews for Tourists Palo Verde National Park**  
**Project “Systematization and analysis of the contribution of the national parks and biological reserves to the economic and social development in Costa Rica”**

The National University is carrying out a research project which its objective is to quantify the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Indicate gender

Gender	
Female	Male

1. What is your nationality?  
 \_\_\_\_\_ Costa Rican (if you are Costa Rican go to question # 4)  
 \_\_\_\_\_ American Country \_\_\_\_\_  
 \_\_\_\_\_ African Country \_\_\_\_\_  
 \_\_\_\_\_ European Country \_\_\_\_\_  
 \_\_\_\_\_ Asian Country \_\_\_\_\_  
 \_\_\_\_\_ Other Specify \_\_\_\_\_
  
2. What was the cost of your airline ticket to get to Costa Rica?  
 \_\_\_\_\_
  
3. How long are you going to stay in Costa Rica?  
 \_\_\_\_\_
  
4. How many people travel with you?  
 \_\_\_\_\_
  
5. Did you know about the existence of the Palo Verde National Park?  
 NO \_\_\_\_\_ YES \_\_\_\_\_  
 How did you know? \_\_\_\_\_
  
6. How did you plan the visit to Palo Verde National Park?
  - a. **Travel agency**
    - a.1 \_\_\_\_\_ National  
 How much did the package cost? \_\_\_\_\_  
 Does it include other additional destinations to Palo Verde National Park?  
 \_\_\_\_\_
    - a.2 \_\_\_\_\_ International  
 How much did the package cost? \_\_\_\_\_  
 Does it include other additional destinations to Palo Verde National Park?  
 \_\_\_\_\_

**b. Tourist operator or independent carrier**

How much did the package cost? \_\_\_\_\_

What places include? \_\_\_\_\_

**c. On his/her own**

**d. By other mean**

Explain \_\_\_\_\_

Cost \_\_\_\_\_

7. What was the last place of your stay (lodging) before getting to Palo Verde National Park?

\_\_\_\_\_

8. Since your last place of stay (lodging), in which costs have you incurred to get to the Palo Verde National Park?

Item	Approximate amount
<i>Food</i>	
<b><i>Lodging:</i></b>	
Hotel	
Cabin	
Other	
<b><i>Transportation:</i></b>	
Maritime	
Terrestrial:	
Bus	
Tourist bus	
Own car	
Rented car (how many days?)	
Other	
<i>Entrance to PNPV</i>	
<i>Other</i>	

9. What is the main attraction of Palo Verde National Park for you?

\_\_\_\_\_

10. How long are you going to stay at Palo Verde National Park?

\_\_\_\_\_

11. Do you think the services offered by the Palo Verde National Park could be improved?

YES \_\_\_\_\_ NO \_\_\_\_\_

Which ones? \_\_\_\_\_

12. After visiting the Palo Verde National Park, will you stay somewhere nearby?

\_\_\_\_\_ No (If your answer is NO go to question # 15)

\_\_\_\_\_ Yes (If your answer is YES go to the answer the next question)

13. Where will you stay in that case and how many days? \_\_\_\_\_  
\_\_\_ Hotel. Cost \_\_\_\_\_  
\_\_\_ Cabin. Cost \_\_\_\_\_  
\_\_\_ Camping area. Cost \_\_\_\_\_. Do you rent the equipment? \_\_NO/YES\_\_ Cost \_\_\_\_\_  
\_\_\_ Other. Cost \_\_\_\_\_
14. Will you visit other places in the area?  
\_\_\_ NO.  
\_\_\_ YES Which ones?  
\_\_\_ Lomas de Barbudal  
\_\_\_ Refugio Silvestre Cipancí  
\_\_\_ Other  
\_\_\_ Which one
15. What type of activities will be carried out or have carried out in Palo Verde National Park or its surroundings?  
\_\_\_ Bird Watching  
\_\_\_ Night Tours  
\_\_\_ Days Tours  
\_\_\_ Others \_\_\_\_\_
16. Which will be the diary spend of your visit to the park?  
Lodging \_\_\_\_\_  
Food \_\_\_\_\_  
Other \_\_\_\_\_  
Which one \_\_\_\_\_ Cost \_\_\_\_\_
17. Do you know what National System of Conservation Areas (SINAC in Spanish of Costa Rica is)?  
\_\_\_ Yes (Please continue with question number 19)  
\_\_\_ No (Please continue with question number 18)
18. The administration of all protected wildlife areas are responsibility for the regulation of the Ministry of Environment, Energy and Telecommunications (MINAET), through the National System of Conservation Areas (SINAC). SINAC integrates the competences in forest, wildlife and protected wildlife areas matters, its objective is to dictate policies, to plan and implement processes aimed at achieving sustainability in natural resources management of Costa Rica. Please continue with question 19.
19. Do you agree with the management of SINAC in the national park?  
\_\_\_ YES      \_\_\_ NO  
Why? \_\_\_\_\_
20. Do you think the services offered by the park could be improved? \_\_\_ YES      \_\_\_ NO  
Which ones? \_\_\_\_\_  
\_\_\_\_\_
21. Are you willing to pay more in the entrance fee to improve the services that the National Park offers?  
Yes \_\_\_      No \_\_\_  
How much? \_\_\_\_\_



No. Survey	Interviewer code

**Interviews for students  
Palo Verde National Park**

**Project “Systematization and analysis of the contribution of National Parks and Biological Reserves to the economic and social development in Costa Rica”**

The National University is carrying out a research project which its objective is to quantify the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Date: \_\_\_\_\_

Place: \_\_\_\_\_

1. Type of lodging (lodging OET/ lodging SINAC): \_\_\_\_\_
2. Name of educational organization where you work / country where is located: \_\_\_\_\_
3. Name of the interviewed person: \_\_\_\_\_
4. Position of the interviewed person/specialization area:  
 \_\_\_\_\_
5. What is your nationality? \_\_\_\_\_ In case you are foreigner, in average, what was the cost of your airline ticket to Costa Rica? \_\_\_\_\_
6. How many days are you planning to stay Palo Verde National Park? \_\_\_\_\_
7. How many people go with you? \_\_\_\_\_
8. How long are you going to stay in Costa Rica? \_\_\_\_\_
9. What was the last place of your stay before coming to the national park?  
 \_\_\_\_\_  
 \_\_\_\_\_

10. Did you have any additional cost before arriving at the national park?

Cost	Approximate amount
Food	
Lodging	
Other	

11. What is the significance of the park in the completion of the journey? What is the main attraction of the Park (ask about the importance of the park for the researcher to visit the zone)?

\_\_\_\_\_  
 \_\_\_\_\_

12. How was the visit organized to this national park?

a)  **Travel agencies**

a.1)  National

How much did the package cost? \_\_\_\_\_

What places do they include? \_\_\_\_\_

a.2)  International

How much did the package cost? \_\_\_\_\_

What places do they include? \_\_\_\_\_

b)  **Tour operator or independent carrier**

How much did the package cost? \_\_\_\_\_

What places do they include? \_\_\_\_\_

c)  **On his/her own**

d)  **OET**

e)  **By other mean** \_\_\_\_\_

Cost \_\_\_\_\_

13. What means of transportation did you use to get here?

Transportation	Amount
<input type="checkbox"/> Public bus	
<input type="checkbox"/> Tourist bus	
<input type="checkbox"/> Own or family car	
<input type="checkbox"/> Rented car, How many days of renting? _____	
<input type="checkbox"/> Other mean. Which one? _____	

14. What is or will be the daily expense of your stay in the park and its surroundings (including food, lodging)? \_\_\_\_\_

15. How did you know about the existence of the Palo Verde National Park?

As a part of a course. From what educational organization? \_\_\_\_\_

Internet. From which website? \_\_\_\_\_

Other. Specify \_\_\_\_\_

16. What is the area of your interest in research?

Birds. Which species? \_\_\_\_\_

Wetland

Forest species. Which species? \_\_\_\_\_

Other. Specify \_\_\_\_\_

17. Will you prepare some report of your visit? YES  NO

What kind of report? \_\_\_\_\_

18. What is the target audience of your research?

Teachers

Other Students

**Analysis of the contributions of National Parks and Biological Reserves to the socio-economic development of Costa Rica.**  
**Case Study: Palo Verde National Park**

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Academicians  
 Other. Specify \_\_\_\_\_

19. What is the source of funding for your work in the park?  
 Own resources  
 Donation. Specify \_\_\_\_\_  
 Research project. Specify \_\_\_\_\_  
 Other. Specify \_\_\_\_\_

20. In your opinion, what percentage of students is attracted by?  
i. Only the park \_\_\_\_\_  
ii. Other attractions \_\_\_\_\_ Specify which ones? \_\_\_\_\_

21. Does the current economic crisis have affected the funds allocated for students field work in the Palo Verde National Park?  YES /  NO  
Explain \_\_\_\_\_  
How? \_\_\_\_\_

22. Approximately, how much raises the cost of your research carried out in the Palo Verde National Park? \_\_\_\_\_  NS / NR \_\_\_\_\_

23. Do you know if your institution is financially supporting or in any other way the maintenance of any protected area?  
 YES, how: \_\_\_\_\_  
 NO, would you be willing to do so in the future? \_\_\_\_\_

24. Do you know what the National System of Conservation Areas (SINAC in Spanish) of Costa Rica is?  
 Yes (Please continue with question number 26)  
 No (Please continue with question number 25)

25. The administration of all protected wildlife areas are responsibility for the regulation of the Ministry of Environment, Energy and Telecommunications (MINAET), through the National System of Conservation Areas (SINAC). SINAC integrates the competences in forest, wildlife and protected wildlife areas matters, its objective is to dictate policies, to plan and implement processes aimed at achieving sustainability in natural resources management of Costa Rica. Please continue with question 26.

26. Do you agree with the management of the MINAET (SINAC) in the park?  YES /  NO  
Why? \_\_\_\_\_

27. Do you think the services offered by the park could be improved?  YES /  NO,  
Which ones? \_\_\_\_\_  
\_\_\_\_\_

28. Are you thinking of visiting other attractions or places in the zone?  YES /  NO  which ones?  
\_\_\_\_\_  
 Lomas de Barbudal Biological Reserve  
 Surrounding communities. Which ones? \_\_\_\_\_  
 Rincón de la Vieja Volcano National Park  
 Others \_\_\_\_\_



No. Survey	Interviewer code

**Interviews for researchers  
Palo Verde National Park**

**Project “Systematization and analysis of the contribution of National Parks and Biological Reserves to the economic and social development in Costa Rica”**

The National University is carrying out a research project which its objective is to quantify the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Date: \_\_\_\_\_

Place: \_\_\_\_\_

1. Type of lodging (lodging OET/ lodging SINAC): \_\_\_\_\_
2. Name of educational organization where you work / country where is located:  
 \_\_\_\_\_
3. Name of the interviewed person: \_\_\_\_\_
4. Position of the interviewed person/specialization area:  
 \_\_\_\_\_
5. What is your nationality? \_\_\_\_\_ In case you are foreigner, in average, what was the cost of your airline ticket to Costa Rica? \_\_\_\_\_
6. How many days are you planning to stay Palo Verde National Park? \_\_\_\_\_
7. How many people go with you? \_\_\_\_\_
8. How long are you going to stay in Costa Rica? \_\_\_\_\_
9. What was the last place of your stay before coming to the national park?  
 \_\_\_\_\_
10. Did you have any additional cost before arriving at the national park?

Cost	Approximate amount
Food	
Lodging	
Other	

11. What is the significance of the park in the completion of the journey? What is the main attraction of the Park (ask about the importance of the park for the researcher to visit the zone)?  
 \_\_\_\_\_  
 \_\_\_\_\_

12. How was the visit organized to this national park?

f)  **Travel agencies**

a.1)  **National**

How much did the package cost? \_\_\_\_\_

What places do they include? \_\_\_\_\_

a.2)  **International**

How much did the package cost? \_\_\_\_\_

What places do they include? \_\_\_\_\_

g)  **Tour operator or independent carrier**

How much did the package cost? \_\_\_\_\_

What places do they include? \_\_\_\_\_

h)  **On his/her own**

i)  **OET**

j)  **By other mean** \_\_\_\_\_

Cost \_\_\_\_\_

13. What means of transportation did you use to get here?

Transportation	Amount
<input type="checkbox"/> Public bus	
<input type="checkbox"/> Tourist bus	
<input type="checkbox"/> Own or family car	
<input type="checkbox"/> Rented car, How many days of renting? _____	
<input type="checkbox"/> Other mean. Which one? _____	

14. What is or will be the daily expense of your stay in the park and its surroundings (including food, lodging)? \_\_\_\_\_

15. How did you know about the existence of the Palo Verde National Park?

Reference of another researcher. From what educational organization? \_\_\_\_\_

Internet. From which website? \_\_\_\_\_

Other. Specify \_\_\_\_\_

16. What is the area of your interest in research?

Birds. Which species? \_\_\_\_\_

Wetland

Forest species. Which species? \_\_\_\_\_

Other. Specify \_\_\_\_\_

17. Will you publish your research? YES  NO  Where? \_\_\_\_\_

18. What is the target audience of your research?

Students  Academicians

Other. Specify \_\_\_\_\_



**Analysis of the contributions of National Parks and Biological Reserves to the socio-economic development of Costa Rica.**  
**Case Study: Palo Verde National Park**

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19. What is the source of funding for your research?

Own resources

Donation. Specify \_\_\_\_\_

Research project. Specify \_\_\_\_\_

Other. Specify \_\_\_\_\_

20. In your opinion, what percentage of researchers is attracted by?

i. Only the park \_\_\_\_\_

ii. Other attractions \_\_\_\_\_ Specify which ones? \_\_\_\_\_

21. Does the current economic crisis have affected the funds allocated for research in the Palo Verde National Park?  YES /  NO

Explain \_\_\_\_\_

How much? \_\_\_\_\_

22. Approximately, how much raises the cost of research carried out in the Palo Verde National Park?

\_\_\_\_\_ NS / NR \_\_\_\_\_

23. Are you financially supporting or in any other way the maintenance of any protected area?

YES, how: \_\_\_\_\_

NO, would you be willing to do so in the future? \_\_\_\_\_

24. Do you know what the National System of Conservation Areas (SINAC in Spanish) of Costa Rica is?

Yes (Please continue with question number 26)

No (Please continue with question number 25)

25. The administration of all protected wildlife areas are responsibility for regulation of the Ministry of Environment, Energy and Telecommunications (MINAET), through the National System of Conservation Areas (SINAC). SINAC integrates the competences forest, wildlife and protected wildlife areas matters, its objective is to dictate policies, to plan and implement processes aimed at achieving sustainability in natural resources management of Costa Rica. Please continue with question 26.

26. Do you agree with the management of the MINAET (SINAC) in the park?

YES  NO, why? \_\_\_\_\_

27. Do you think could be improved the services that the park provides?  YES /  NO, which ones? \_\_\_\_\_

\_\_\_\_\_

28. Are you thinking of visiting other attractions or places in the zone?  YES /  NO, which ones?

\_\_\_\_\_

Lomas de Barbudal Biological Reserve

Surrounding communities. Which ones? \_\_\_\_\_

Rincón de la Vieja Volcano National Park

Others \_\_\_\_\_

29. What is you calculatio about the daily cost of your visit to the places specified in 28?

\_\_\_\_\_ Lomas de Bambudal Biological Reserve

\_\_\_\_\_ Surrounding communities.

\_\_\_\_\_ Rincón de la Vieja Volcano National Park

\_\_\_\_\_ Others



No. Survey	Interviewer code

**Interviews for Teachers  
Palo Verde National Park**

**Project “Systematization and analysis of the contribution of National Parks and Biological Reserves to the economic and social development in Costa Rica”**

The National University is carrying out a research project which its objective is to quantify the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Date: \_\_\_\_\_

Place: \_\_\_\_\_

1. Type of lodging (lodging OET/ lodging SINAC): \_\_\_\_\_
2. Name of educational organization where you work / country where is located:  
 \_\_\_\_\_
3. Name of the interviewed person: \_\_\_\_\_
4. Position of the interviewed person/specialization area:  
 \_\_\_\_\_
5. What is your nationality? \_\_\_\_\_ In case you are foreigner, in average, what was the cost of your airline ticket to Costa Rica? \_\_\_\_\_
6. How many days are you planning to stay Palo Verde National Park? \_\_\_\_\_
7. How many people go with you? \_\_\_\_\_
8. How long are you going to stay in Costa Rica? \_\_\_\_\_
9. How many times in the year do you come to Palo Verde National Park? \_\_\_\_\_
10. What was the last place of your stay before coming to the national park? \_\_\_\_\_
11. Did you have any additional cost before arriving at the national park?

Cost	Approximate amount
Food	
Lodging	
Other	

12. What is the significance of the park in the completion of the journey? What is the main attraction of the Park (ask about the importance of the park for the researcher to visit the zone)?

\_\_\_\_\_  
 \_\_\_\_\_

13. How was the visit organized to this national park?

k)  **Travel agencies**

a.1)  National

How much did the package cost? \_\_\_\_\_  
 What places do they include? \_\_\_\_\_

a.2)  International

How much did the package cost? \_\_\_\_\_  
 What places do they include? \_\_\_\_\_

l)  **Tour operator or independent carrier**

How much did the package cost? \_\_\_\_\_  
 What places do they include? \_\_\_\_\_

m)  **On his/her own**

n)  **OET**

o)  **By other mean** \_\_\_\_\_  
 Cost \_\_\_\_\_

14. What means of transportation did you use to get here?

Transportation	Amount
<input type="checkbox"/> Public bus	
<input type="checkbox"/> Tourist bus	
<input type="checkbox"/> Own or family car	
<input type="checkbox"/> Rented car, How many days of renting? _____	
<input type="checkbox"/> Other mean. Which one? _____	

15. What is or will be the daily expense of your stay in the park and its surroundings (including food, lodging)? \_\_\_\_\_

16. How did you know about the existence of the Palo Verde National Park?

As a part of a course.  Which one? \_\_\_\_\_  
 As a part of a training.  Which one? \_\_\_\_\_  
 Reference of another teacher. From what educational organization? \_\_\_\_\_  
 Internet. From which website? \_\_\_\_\_  
 Other. Specify \_\_\_\_\_

17. What is the area of your interest in teaching?

Birds. Which species? \_\_\_\_\_  
 Wetland  
 Forest species. Which species? \_\_\_\_\_  
 Other. Specify \_\_\_\_\_

18. How are you going to use the knowledge learned in the activity that you attended in the Palo Verde National Park?

**Analysis of the contributions of National Parks and Biological Reserves to the socio-economic development of Costa Rica.**  
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Publication. Where \_\_\_\_\_  
 Training to other teachers. Where \_\_\_\_\_  
 Training to communities or to organized groups.  
Which ones? \_\_\_\_\_  
 Others. Specify \_\_\_\_\_

**19.** What is the source of funding for your activity in the National Park?

Own resources  
 Donation. Specify \_\_\_\_\_  
 Research project. Specify \_\_\_\_\_  
 Other. Specify \_\_\_\_\_

**20.** In your opinion, what percentage of teachers is attracted by?

i. Only the park \_\_\_\_\_  
ii. Other attractions \_\_\_\_\_ Specify which ones? \_\_\_\_\_

**21.** Does the current economic crisis have affected the funds allocated for your activity in the Palo Verde National Park?  YES /  NO

Explain \_\_\_\_\_  
How much? \_\_\_\_\_  
How? \_\_\_\_\_

**22.** Approximately, how much raises the cost of the activity carried out in the Palo Verde National Park?  
\_\_\_\_\_  NS / NR \_\_\_\_\_

**23.** Are you financially supporting or in any other way the maintenance of any protected area?

YES, how: \_\_\_\_\_  
 NO, would you be willing to do so in the future? \_\_\_\_\_

**24.** Do you know what the National System of Conservation Areas (SINAC in Spanish) of Costa Rica is?  
 Yes (Please continue with question number 26)  No (Please continue with question number 25)

**25.** The administration of all protected wildlife areas are responsibility for regulation of the Ministry of Environment, Energy and Telecommunications (MINAET), through the National System of Conservation Areas (SINAC). SINAC integrates the competences in forest, wildlife and protected wildlife areas matters, its objective is to dictate policies, to plan and implement processes aimed at achieving sustainability in natural resources management of Costa Rica. Please continue with question 26.

**26.** Do you agree with the management of SINAC in the national park?  YES /  NO  
Why? \_\_\_\_\_

**27.** Do you think the services offered by the park could be improved?  YES /  NO,  
Which ones? \_\_\_\_\_  
\_\_\_\_\_

**28.** Are you thinking of visiting other attractions or places in the zone?  YES /  NO  which ones?

\_\_\_\_\_  Lomas de Barbudal Biological Reserve  
\_\_\_\_\_ Surrounding communities. Which ones? \_\_\_\_\_  
\_\_\_\_\_ Rincón de la Vieja Volcano National Park  
\_\_\_\_\_ Others \_\_\_\_\_



No. encuesta	Código encuestador (a)

**Interviews for OET Palo Verde National Park**  
**Project “Systematization and analysis of the contributions of National Parks and Biological Reserves to the economic and social development in Costa Rica”**

The National University is carrying out a research project which its objective is to quantify the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Date: \_\_\_\_\_

Place: \_\_\_\_\_

Name of the enterprise (optional):

\_\_\_\_\_

Name of the interviewee (optional):

\_\_\_\_\_

Position of the interviewee (optional):

\_\_\_\_\_

**1. General Questions**

1. What type of services or products does the station offer?

\_\_\_\_\_  
 \_\_\_\_\_

2. How long ago do you offer these services or products in the Station?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

2. How do you promote the Station?

Internet: \_\_\_\_\_

Contact abroad: \_\_\_\_\_ who? \_\_\_\_\_

Contact in the country: \_\_\_\_\_ who? \_\_\_\_\_

Others: \_\_\_\_\_

4. How many tourists does your agency take to Palo Verde National Park?

High Season: \_\_\_\_\_

Low Season: \_\_\_\_\_

5. How many are foreign tourists and how many are nationals?

Foreigners: \_\_\_\_\_

Nationals: \_\_\_\_\_

6. What percentage of your sales is related with Palo Verde National?

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7. How often do you take tourists to Palo Verde National Park?

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8. What percentage of your sales are related to Palo Verde National Park?

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9. What percentage of the visitors uses the service of accommodation?

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10. What percentage of the visitors uses the service of restaurant?

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**2. Questions about Suppliers**

11. What input do you require offering the service?

Input	Who provide it?			
	Offices and Lab.	Restaurant	Accommodation	Souvenir Shop
Food				
Other products				

12. Which is the monthly cost of the inputs mentioned in 11?

Input	Monthly cost			
	Offices and Lab	Restaurant	Accommodation	Souvenir Shop
Food				
Other products				

13. Where did you buy the furniture and equipment you use in your business?

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**3. Operation and fixed costs**

14. What is your monthly expense regarding?

Item	Monthly cost				Total
	Offices and Laboratory	Restaurant	Accommodation	Souvenir Shop	
Electricity					
Water					
Telephone					
Internet					
Cleaning					
Maintenance					
Cable T.V.					
Food					
Souvenirs					
Other services and products					

15. How many people work in the enterprise in each season? (Including yourself)

	Low Season	High Season
Relatives		
Employees		

16. How much is the amount you pay for monthly wages?

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**4. Incomes**

17. Is the lodge maintaining just with the visits of tourists or does it have other sources of income?

Yes: \_\_\_\_\_ No: \_\_\_\_\_

Which one? \_\_\_\_\_

18. How much is the daily average payment of the visitors?

Researchers \_\_\_\_\_ what does it include? \_\_\_\_\_

Students \_\_\_\_\_ what does it include? \_\_\_\_\_

Teachers \_\_\_\_\_ what does it include? \_\_\_\_\_

Diurnal Tourists \_\_\_\_\_ what does it include? \_\_\_\_\_

Nocturnal Tourists \_\_\_\_\_ what does it include? \_\_\_\_\_

19. Approximately, how much raises the monthly/annual sales that are made in the following seasons?

Item	Supplier			
	Restaurant	Accommodation	Souvenir Shop	Other
High Season				
Low Season				

20. What percentage of your sales is made to visitors of Palo Verde National Park?

21. How have been your sales affected by the economic crisis?

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**5. Investment**

22. Are you planning on expanding the capacity of the shelter (to build more or to offer more services)?

\_\_\_ YES/ NO \_\_\_, why? \_\_\_\_\_

23. How much money have you approximately invested in the shelter up to date? \_\_\_\_\_

**6. Environmental Management**

24. Where does the water you come from?

Concession (well): \_\_\_\_\_

Aqueduct: \_\_\_\_\_

Other: \_\_\_\_\_

25. Do you have a treatment plant for sewage? YES: \_\_\_\_\_ NO: \_\_\_\_\_

26. How do you manage the solid wastes (garbage)? \_\_\_\_\_

27. Do you practice the separation and recycling of wastes? YES \_\_\_\_\_ NO \_\_\_\_\_

28. Do you have any certification? YES: \_\_\_\_\_ NO: \_\_\_\_\_ which one? \_\_\_\_\_

**7. Organization and relation with Palo Verde National Park**

29. In your opinion, would you be in favor of an increase in tourism for the park?

Yes \_\_\_\_\_ No \_\_\_\_\_ Why? \_\_\_\_\_

30. In your opinion, what can be done to promote and maintain tourism for Palo Verde National Park?

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31. Do you agree with the management of MINAE in the park? \_\_ YES / No \_\_, why?

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32. How does the Station collaborate for the management of Palo Verde National Park?

Action/Activity	Monthly Cost	Annual Cost

33. Would you agree in collaborating for the management of Palo Verde National Park?

How? \_\_\_\_\_

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No. Survey	Interviewer code

**Interviews for the Lodge of SINAC Palo Verde National Park**  
**Project “Systematization and analysis of the contributions of National Parks and Biological Reserves to the economic and social development in Costa Rica”**

The National University is carrying out a research project which its objective is to quantify the contributions of National Parks to the socio-economic development of Costa Rica. In this sense, we require your collaboration to complete the following questionnaire. All the information gathered will be used only for academic purposes.

Date: \_\_\_\_\_

Place: \_\_\_\_\_

Name of the Enterprise (optional):

\_\_\_\_\_

Name of the interviewee (optional):

\_\_\_\_\_

Position of the interviewee (optional):

\_\_\_\_\_

**I. General Questions**

1. What type of services or products does the lodge offers?

\_\_\_\_\_  
 \_\_\_\_\_

2. How long ago do you offer these services or products to the lodge?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

3. How the lodge is promoted?

Internet: \_\_\_\_\_

Contact abroad: \_\_\_\_\_ who? \_\_\_\_\_

Contact in the country: \_\_\_\_\_ who? \_\_\_\_\_

Others: \_\_\_\_\_

4. How many visitors does this lodge bring to Palo Verde National Park?

High Season: \_\_\_\_\_

Low Season: \_\_\_\_\_

5. How many are foreign tourists and how many are nationals?

Foreigners: \_\_\_\_\_

Nationals: \_\_\_\_\_

6. Does the lodge have visitors the whole day?

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7. What means of transportation do the tourists take to get here?

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8. What percentage of your sales is related with Palo Verde National Park?

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9. What percentage of the visitors uses the lodge of accommodation?

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10. What percentage of the visitors uses the service of restaurant?

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**II. Questions about Suppliers**

11. What input do you require offering your services?

Input	Who provide it?		
	Offices	Restaurant	Lodging
Food			
Other products			

12. What is the monthly cost of the inputs mentioned before in 11?

Input	Monthly cost		
	Offices	Restaurant	Lodging
Food			
Other products			

13. Where did you buy the furniture and equipment you use in the lodge?

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**III. Operation and fixed costs**

14. What is the monthly cost regarding?

Item	Monthly cost			Total
	Offices	Restaurant	Lodging	
Electricity				
Water				
Telephone				
Internet				
Cleaning				
Maintenance				
Cable T.V				
Others				

15. How many people work in the lodge in each season? (Including yourself)

	Low Season	High Season
Rangers		
Auxiliary Staff		

16. How much is the amount you pay for wages monthly?

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**IV. Incomes**

17. Is the lodge maintaining just with the visits of tourists or does it have other sources of income?

Yes: \_\_\_\_\_ No: \_\_\_\_\_

Which one? \_\_\_\_\_

18. How much is the daily average payment of the visitors?

Researchers \_\_\_\_\_ what does it include? \_\_\_\_\_

Students \_\_\_\_\_ what does it include? \_\_\_\_\_

Teachers \_\_\_\_\_ what does it include? \_\_\_\_\_

Diurnal Tourists \_\_\_\_\_ what does it include? \_\_\_\_\_

Nocturnal Tourists \_\_\_\_\_ what does it include? \_\_\_\_\_

19. Approximately, how much raises the monthly/annual sales that are made in the following seasons?

Item	Sales (colones/month – (Colones/year)		
	Restaurant	Lodging	Other
High Season			
Low Season			

20. What percentage of your sales is made to visitors of Palo Verde National Park?

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21. How your sales have been affected by the economic crisis?

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**V. Investment**

22. Are you planning on expanding the capacity of the lodge (to build more or to offer more services)?  
Yes \_\_, \_\_ NO / why? \_\_\_\_\_

23. How much money has approximately invested on the lodge up to date? \_\_\_\_\_

**VI. Environmental Management**

24. Where does the water you use come from?

Concession (well): \_\_\_\_\_

Aqueduct: \_\_\_\_\_

Other: \_\_\_\_\_

25. Do you have a treatment plant for sewage? Yes: \_\_\_\_\_ NO: \_\_\_\_\_

26. How do you manage the solid wastes (garbage)? \_\_\_\_\_

27. Do you practice the separation and recycling of wastes? YES: \_\_\_\_\_ NO: \_\_\_\_\_

28. Do you have any certification? YES: \_\_\_\_\_ NO: \_\_\_\_\_ which one? \_\_\_\_\_

**VII. Organization and relation with Palo Verde National Park**

29. In your opinion, would you be in favor of an increase in tourism for the park?

YES \_\_\_\_\_

NO \_\_\_\_\_

Why? \_\_\_\_\_

30. In your opinion, what can be done to promote and maintain tourism for Palo Verde National Park?

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31. Do you think the management of SINAC-MINAET can be improved? \_\_ YES / NO \_\_, How?

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