



mejorando nuestra **HERENCIA**



Final Evaluation Report of Canaima National Park, Venezuela, World Heritage Site

Isabel Novo Torres (VITALIS)
Diego Díaz Martín (VITALIS)

Caracas, Venezuela
October 2007

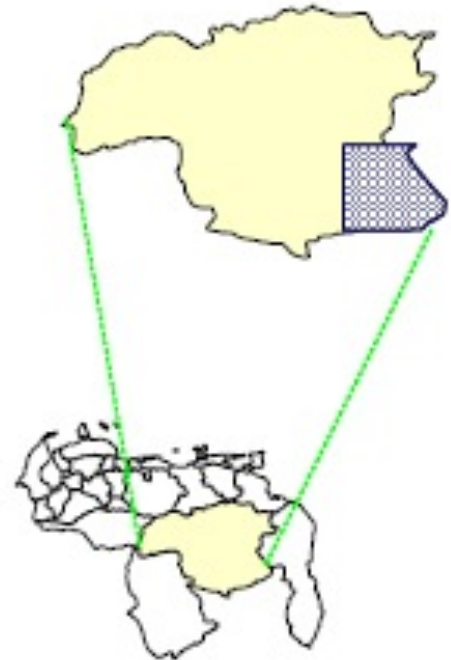
Summary

Improving Our Heritage is an initiative in collaboration with UNESCO, Queensland University, and the World Conservation Union (IUCN) and financed by the United Nations Foundation. The project began in 2002 in nine World Heritage Sites, three of which in Africa, three in Asia, and three in Latin America. The main objective is to promote the development of monitoring and evaluation systems as well as reporting on the management effectiveness of World Heritage Sites. In Latin America and the Caribbean the project selected Rio Platano Biosphere Reserve in Honduras, Sangay National Park in Ecuador, and Canaima National Park in Venezuela. In Canaima the project was carried out under the coordination of INPARQUES and the non-profit VITALIS, with support from indigenous communities, the Government of Edo. Bolivar, Guayana Venezuela Corporation, Edelca, the Viceministry of Tourism, Ministry for Indigenous Popular Power, National Experimental University of Guayana, National Guard, and non-governmental organizations such as The Nature Conservancy, EcoNatura, Conservation International, CEDIG, Fundación La Salle, and Provita.

Ubicación del PNC, Venezuela



FUENTE: FUNDACIÓN PARQUES NACIONALES Y OTROS PATRIMONIOS



Acknowledgments

The editors thank all those who contributed to this report, especially workshop participants. They would like to recognize the staff of INPARQUES, in particular Marco Morales, Cesar Cario, and Michael Matany for the information they shared. A special thanks goes out to Olga Herrera for her support in compiling data for the second management effectiveness evaluation of Canaima National Park.

TABLE OF CONTENTS

Section 1. Introduction	4
Section 2. Context	7
Tool 1. Identification of Site Values and Management Objectives	7
Tool 2. Site Threats and Pressures	16
Tool 3. Relationships with Stakeholders/Partners	36
Tool 4. Review of National Context	55
Section 3. Planning	64
Tool 5. Assessment of Management Planning.	64
Tool 6. Design and Management Assessment.....	66
Section 4. Inputs and Process	70
Tool 7. Assessment of Management Needs and Inputs.....	70
Section 5. Management Processes	76
Tool 8. Results for the second management efficiency evaluation (processes).....	76
Section 6. Products	90
Tool 9. Results from the second management effectiveness evaluation (products) ...	90
Tool 10. Evaluation of management products across selected indicators.....	93
Section 7. RESULTS	95
Biodiversity Health: Conservation of Site Values	95
Summary of project results.....	97
CONCLUSIONS AND RECOMMENDATIONS	99
REFERENCES	101
Anexos	106
Annex 1. Field data collection score sheet. Canaima National Park. Review of the optimal scenario 2004 vs. 2007	106
Annex 2. Index of Legal Norms Relevant to the Management of Canaima National Park	115
Annex 3. Participant Directory for Project Enhancing Our Heritage, Canaima (2002-2007).. ..	118
Annex 4. INPARQUES Staff Satisfaction Questionnaire.....	124

SECTION 1. INTRODUCTION

Improving Our Heritage (IoH) was an initiative of UNESCO, Queensland University, and the World Conservation Union (IUCN) financed by the United Nations Foundation. Its main objective was to promote the development of monitoring and evaluation systems and reporting on the management effectiveness of World Heritage Sites. The project began in 2002 in nine World Heritage Sites located in Africa, Asia, and Latin America.

In 2002 an initial report on the state of conservation and management in Canaima National Park (CNP) was written. This report used the framework for Evaluating Management Effectiveness of Protected Areas (Hockings *et al.*, 2000) adopted by IUCN's World Parks Commission (WCPA).

The WCPA approach is divided into six sections that reflect different elements of management effectiveness:

1. Context of existing values and threats
2. Analysis of planning
3. Resource allocation (**inputs**)
4. Management actions (**processes**)
5. Eventual production of goods and services (**products**)
6. Conservation impacts or **results**



These sections are highly linked and complementary. For example, the identification of threats and pressures (context section) is the first step in the analysis of the state of threats (results section). Similarly, the identification of site values or principal management objects (context) provides a focus for all the elements in the evaluation.

The 2007 Workbook for Management Effectiveness was the basis for this report.

One hundred and seventeen people from indigenous communities and at least 30 public and private institutions participated throughout this project (2002-2007).

Technical Details

World Heritage Site:	Canaima National Park (CNP), Venezuela
IUCN Category:	II (National Park)
Declaration:	12 June 1962, Executive Decree No. 770, published in the G.O. N. 26873 on 13 June 1962, covering 1,000,000 ha.
Boundary updates:	The park was increased to 3,000,000 with Executive Decree No. 1137 (9 September 1975) published in G.O. No. 30809 on 01 September 1975.
Land Use Plan and Regulations for the Use of the Eastern Side of CNP (The Great Savannah)	By means of Executive Decree No. 1640 (5 June 1991) published in G.O. No. 34.758 on 18 July 1991, the Land Use Plan and Regulations covered a territory of 1,812,000 ha. The rest of the park is under the jurisdiction of Decree 276 (9 June 1989), about the administration and management of national parks and also the Development of Land Use Planning Law (G.O. No. 38.264 on 2 September 2005).
World Heritage Site:	In November 1994, CNP was added to the World Heritage List, inscribed for four criteria established by the World Heritage Convention

SECTION 2. CONTEXT

TOOL 1. IDENTIFICATION OF SITE VALUES AND MANAGEMENT OBJECTIVES

Given CNP's ecological and environmental importance, its geological and landscape values, and its world class status as a national park, it was decided to launch in 1991 an evaluation of the site's values in order to nominate it as world heritage under the four criteria established by UNESCO in the World Heritage Protection Convention (16 November 1972), ratified by Venezuela in 1990.

CNP:

1. Is a relevant sample representing the major phases of evolution on Earth.
2. Is an outstanding example of geological and biological processes in the development of terrestrial and aquatic ecosystems and plant and animal communities.
3. Contains rare and unique natural phenomena such as formations, aspects, and exceptionally beautiful areas.
4. Contains habitat for plants and animals rare or in danger of extinction.

After the evaluation and IUCN's park inspection and with the proposal submitted by the management of the National Parks Institute, UNESCO's World Heritage Committee added CNP in 1994 to the World Heritage List as a natural site.



As part of the IoH Project, in 2002 a taller proposed the following objectives:

- Achieve consensus on CNP's site values
- Identify threats and sources of pressure for each value
- Identify strategies for each source of pressure
- Define priorities, responsible parties, and time frames for each source of pressure.

Workshop participants identified 11 site values described in the worksheet. They relate to the specific objectives for the area and linked to the selection criteria of a World Heritage Site.

It is important to clarify that "Principal Management Objects" defined at the beginning of the project as the values or selection attributes (at the species level, of other major groupings, landscapes, and sociocultural aspects), will now be called site values in the *2007 Toolbook*, also used in this report.

WORKSHEET FOR TOOL 1. Description of Site Values.

TYPE OF VALUE	SITE VALUE	RELATIONSHIP WITH SPECIFIC OBJECTIVES OF THE AREA (see criteria ¹):	LINKAGE WITH SELECTION CRITERIA AS A WHS	DESCRIPTION OF THE VALUE
BIODIVERSITY VALUES	1. Tepuyan Formations	1, 2, 3, 4, 5, 6	I, II, III, IV	Tepuyan formations, a particular type of mountain or hill represents an emblematic site for the park, part of the Guayana Shield. They may or may not have the shape of a plateau, composed of sedimentary (sandstones, quartz) or igneous rocks that rise from a minimum altitude of 800 m to a maximum of 3,015 m above sea level. Besides, medium and high mountain ecosystems (meso and sub-microthermic) subject to rainy humid climates, are different from this type of mountain in terms of biology and tropical formations. They have these Tepuyan ecosystems, with a variety of endemic plant and animal communities. The definition of tepuy is based on a unique combination of physiographic and ecological criteria (Pan Tepuy Province), only found on the Guayana Shield.
	<p>Most important Tepuyes:</p> <p>Western sector: on Los Testigos Hill: Kamarkawarai (2,400 m), Tekere-yurén (1,900 m), Murisipan (2,450 m) and Aparaman (2,100 m); on the Auyan Hill: Auyantepuy (2,450 m), La Luna Hill (1,650 m), El Sol Hill (1,750 m) and Uaipán (1,950 m); on Aprada Hill: Aprada (2,500 m) and Araopan (2,450 m); on the Chimantá Hill: Murey (Eruoda) (2,650 m), Tirepon (2,600 m), Apakara (2,450 m), Abakapa (2,400 m), Agparaman (2,400 m), Torono (2,500 m), Chimanta (2,550 m), Churi (2,500 m), Akopan (2,200 m), Amuri (2,200 m), Angasima (2,250 m) and Upuigma (2,100 m); resides Venado Hill (1,320 m) and Kurun (1,100 m).</p> <p>In the Eastern Sector the most outstanding tepuyes are Sororopan (2,050 m), Pta (2,400) y Roraima (2,723 m)</p>			This evaluation includes those ecosystems found from the bottom to the top of the tepuyes.

Source: www.exoticamazon.com

¹ WORLD HERITAGE SITE SELECTION CRITERIA

Criterion I. Significant sample that shows the major historical phases in the evolution of Earth.
 Criterion III Contains outstanding natural phenomena or areas of exceptional natural beauty and aesthetic importance

Criterion II: Examples of evolutionary, biological, geological or ecological processes
 Criterion IV Contains the most important and significant habitats for biodiversity conservation

TYPE OF VALUE	SITE VALUE	RELATIONSHIP WITH SPECIFIC OBJECTIVES OF THE AREA (see criteria ¹):	LINKAGE WITH SELECTION CRITERIA AS A WHS	DESCRIPTION OF THE VALUE
BIODIVERSITY VALUES	2. Savannah-forest Ecotone	1, 2, 3, 4, 5	I, II, III, IV	<p>The forest-savannah ecotone in the Great Savannah varies throughout its range. It can exhibit abrupt transitions between forest and savannah or as a gradual transition of vegetative edges from savannah with bushes to savannah with ferns, to scrubland and low forest. Some species can be found along this edge such as <i>Pteridium aquilinum</i> (Kampai or Kambai, Pteridaceae, the dominant fern), common species of savannahs (grasses and ciperaceae) accompanied by trees found on the savannah such as <i>Byrsonima crassifolia</i> (Poureyek, Malpighiaceae) and <i>Miconia albicans</i> (Sakauyek, Melastomataceae). Where forest begins one can find <i>Dymorphandra macrostachya</i> (especially where water is nearby), <i>Schefflera morototoni</i> (Pounayek, Araliaceae), <i>Hyptidendron arboreum</i> (Krichoyek, Lamiaceae, a species resistant to fire), <i>Myrcia</i> sp. (Tuponyek, Myrtaceae), <i>Ochthocosmus roraimae</i> (Itoiyenayek, Ixonanthaceae) and <i>Croton kavanayensis</i> (Kusapoyek or Katapoyek, Euphorbiaceae). This description corresponds to watershed vegetation of Yuruani and Aponwao in the eastern sector of the park, which varies in terms of species composition from other sectors. This zone is heavily used by the Pemón people as can be seen in the OFM description: areas used by local communities.</p> <p>Within this object, secondary scrublands are also included.</p> <p style="text-align: center;"><i>Photo: D. Díaz Martín</i></p>
	3. Gallery Forest	1, 2, 3, 4, 6	I, II, III, IV	<p>Hernandez (1999) includes gallery forests in the category or riverine forests, wetland and “cañada” forests. Lato sensu riverine forests are those communities that occupy habitats adjacent to main drainage points, both permanent and intermittent, where soil humidity is higher than expected. There are differences between riverine forests (surrounded by interfluvial forests) and gallery forests that appear within savannah landscapes (Huber 1995a, 1995b). The majority of gallery forests can be found in medium to low hydrographic areas, especially in the principal drainage valleys. The dominant landscape of these areas includes grassy savannahs with forest fragments. These forests temporally flood or whose soils are frequently saturated with an abundant flora and contiguous forests. Hernandez (1999) notes that studies on gallery forests in the Great Savannah are few although the their findings lead one to conclude that these forests are unique; normally in Guayana such flooded forests are restricted to low lands, and in the Caroní River watershed they are poorly represented.</p> <p>The principal gallery forests are found in the medium and low watersheds in Aponwao, Kukenan, Caroní, Yuruani, Karuai and Carrao.</p> <p style="text-align: center;"><i>Source: www.exoticamazon.com</i></p>

TYPE OF VALUE	SITE VALUE	RELATIONSHIP WITH SPECIFIC OBJECTIVES OF THE AREA (see criteria ¹):	LINKAGE WITH SELECTION CRITERIA AS A WHS	DESCRIPTION OF THE VALUE
4. Morichales		1, 2, 3, 4	I, II, III, IV	

BIODIVERSITY VALUES

Source: www.islamargarita.com/canaima.htm

Photo: H. Arnal

This type includes extensive communities of the moriche palm (Kuaidek, *Mauritia flexuosa*, Arecaceae) growing inside the very dense herbaceous level less than two meters tall (Schubert, C. and O. Huber, 1989). The palms are defined as savannah palms, considered part of savannah ecosystems because they are dominated by an herbaceous level which is only marginally influenced by palms. Thanks in part to deep, dark clayey and rich organic soils, the savannahs flood during much of the year. Frequently the soil surface is characterized by alternating mounds and small depressions in which water can accumulate for long periods. The moriche palm grows as well in gallery forests, but never in the same quantities found in open savannah (Schubert, C. and O. Huber, 1989). This description applies currently to the majority of moriche patches inside the park; nevertheless, this seems to be a product of recurring fires that cross these patches practically all year.

Teran and Duno (1988), cited by Huber and Febres (2000), worked with moriche Río Kukenan patches that were only mildly affected by fire. Here reside the herbaceous genera noted by Huber, various species of Eriocaulaceae, Xiridaceae, and Heliconiaceae, and bushes that belong to the Ongraceae, Melastomataceae, Sterculiaceae, Malvaceae and Asteraceae.

From an ecological point of view, the moriche palm is an important food provider to birds and mammals associated with this ecosystem; besides it efficiently traps sediments. Indigenous communities also use many different parts, including its fruit, leaves, trunk, and others (Huber and Febres, 2000).

The moriche patches are distributed in floodplains in the valleys of estuaries of the main rivers that cross the park (Kukenan, Aponwao, Yuruani, Carrao, Karuai), reaching an altitude of 1,100 m above sea level, "where it seems to reach its ecological altitudinal limit of distribution" (Schubert and Huber, 1989).

TYPE OF VALUE	SITE VALUE	RELATIONSHIP WITH SPECIFIC OBJECTIVES OF THE AREA (see criteria ¹):	LINKAGE WITH SELECTION CRITERIA AS A WHS	DESCRIPTION OF THE VALUE
BIODIVERSITY VALUES	5. Bushes growing on rock (bushes on sand and quartz soils)	1,2,3,4	I, II, III, IV	<p>According to Huber (1995b), this element consists of the typical bush that grows on sandy layers slightly to moderately sloped and characterized by a dense bushy level 0.5-3 m tall. The individual bushes, nonetheless, are dispersed irregularly, forming large groups, leaving some much less dense areas which allow a free but erratic (non-linear) movement of the bush front. Given that there is practically no soil, the majority of the bushes grow on exposed rock, sending their roots down into the many cracks and fissures in the rocky plates. Herbaceous plants almost always grow in small depressions around the rock where there are reduced accumulations of sandy soil. In these bushy areas, there are species from the following families: Clusiaceae, Flacourtiaceae, Humiriaceae, Melastomataceae, Rubiaceae and Ericaceae. There are others present but in more irregular and fragmented distributions Poaceae, and Ciperaceae, as well as three genera of lianas: Mandevilla, Cynanchum and Pasiflora. There are some epiphytes and woody parasites, although few in number.</p> <p>The above description corresponds to the bushy areas found on slopes on the western side of the Karaurin River to Soruape River valley, a branch of the Yuruaní and Mapaurí Rivers and northeast of Püratepüi of the Roraima. In the proximity of Kavanayén there are bushy areas with <i>Bonnetia sessilis</i>, and in the western sector these areas are located near the extensive plains that surround the base of the Auyan Tepuy</p>
				<p>Photo: H. Arnal</p>
BIODIVERSITY AND ECONOMIC VALUES	6. Water	1, 2, 3, 4, 5, 6	II, III, IV	<p>CNP is almost completely in the medium to high watershed of the Carona River, although it also overlaps part of the watersheds of the Cuyuní (Lema) and the Mazaruni (Kamoiran and its estuaries). These waters, aside from being the principal source for hydroelectric generation on the Guri and Macagua, are used for human consumption and habitat for fish, mammals, reptiles, and birds. In this protected area there are 52 species of fish from five orders and 17 families, with 14 endemics.</p> <p>In the rivers there are some of the world's highest waterfalls such as Angel Falls in the Auyantepui and the Kukenán in the Kukenán Tepui.</p>

Source: www.inparques.gov.ve

TYPE OF VALUE	SITE VALUE	RELATIONSHIP WITH SPECIFIC OBJECTIVES OF THE AREA (see criteria ¹):	LINKAGE WITH SELECTION CRITERIA AS A WHS	DESCRIPTION OF THE VALUE
7. Threatened species and degraded habitats		1, 2, 3, 4	IV	

BIODIVERSITY VALUES

Source: www.exoticamazon.com

This element ranges from highly degraded savannahs to species potentially in danger of extinction. With respect to savannahs, it is worth mentioning those that surround the Arabopo River (on the southeast border of the park), those in the high area of Kukenan, those around the principal indigenous communities, and those around Troncal 10, the road to Kavanayen and to Püratepü de Roraima.

In general savannahs are defined by Huber and Febres (2000) as open or smooth, with a consistent structure within a more or less continuous but variably dense herbaceous zone, composed principally of perennial grassy herbs from 0.1 a 1.5 m tall, predominantly grasses and ciperaceae. There are also herbs from families such as Rubiaceae, Convolvulaceae and Asteraceae, among others (Schubert, C. and O. Huber, 1989). Other areas could be degraded such as the scrublands with ferns at the base of the Roraima, around Püratepü, along the mountains of Kako-Soroshoroyen (which divides the watersheds between Kukenan and Aponwao), the valleys of Mauruk (in the zones of Aguja or Wei Tepuy), and the vegetation of Tiger Hills, a chain of low hills running northeast to southwest and composed of sub volcanic rocks (diabasas) of the Kamoiran dike that makes its way to the Kavanayen area. According to Huber and Febres (2000), this length was covered by dense submontane forests, but because of repeated forest fires this century, the forest cover has been heavily reduced and is being replaced by a secondary vegetation of ferns and scrub with significant standing dead wood.

Several species are hunted for subsistence (macaw, deer, tapir, others) and some, such as cats and foxes, because they are deemed threats to livestock cattle and birds.

TYPE OF VALUE	SITE VALUE	RELATIONSHIP WITH SPECIFIC OBJECTIVES OF THE AREA (see criteria ¹):	LINKAGE WITH SELECTION CRITERIA AS A WHS	DESCRIPTION OF THE VALUE
---------------	------------	---	--	--------------------------

8. Grasses and bushes on turbas (bushes on sandstone and quartz)

1,2,3,4

I, II, III, IV

BIODIVERSITY VALUES

Photo: O. Huber

This element is found on a saturated substrate and formed principally from accumulations of organic material. Huber (1994) describes these ecosystems as associated with an herbaceous level usually very dense with *Brocchinia* (Bromeliaceae) or *Stegolepis* (Rapataceae), found with a fragmented patches of bushes, often in more or less isolated groups. Low and thin bushes such as *Bonnetia sessilis* (Theaceae), *Chalepophyllum guianensis* and *Pagameopsis maguirei* (Rubiaceae), or *Digomphia laurifolia* (Bignoniaceae) are the principal components of these islands, along whose edges often dominate a bush as much as 4 m tall and with colorful purple flowers, *Meriania sclerophylla* (Melastomataceae). These bush communities growing on soils with *Sphagnum*, as well as their accompanying herbaceous neighbors, tend to prefer the phitogeographical complex of PanTepuy in terms of their general ecological characteristics. Currently these communities found at the higher altitudes of the Great Savannah represent relict Tepuyan ecosystems that formed during climatic changes in the Pleistocene.

The principal bushy and herbaceous patches found on turba inside the park are in the north of the eastern sector, in the watershed of the Kamoirán, although there are also small patches on the upward route to Roraima. The main areas are found outside the park, northeast of San Juan and San Rafael de Kamoirán.

TYPE OF VALUE	SITE VALUE	RELATIONSHIP WITH SPECIFIC OBJECTIVES OF THE AREA (see criteria ¹):	LINKAGE WITH SELECTION CRITERIA AS A WHS	DESCRIPTION OF THE VALUE
9. Human Settlements	5		These criteria do not apply given that they are for natural, not cultural, heritage sites	<p>The patterns of Pemón settlement have been affected for at least a century since the arrival of the Catholic and Adventist missionaries. Nevertheless they have conserved some common patterns. The communities tend to be found in savannah, on higher points, near forests, where there are “conucos” (a subsistence system for farmers with shifting cultivation plots) and medium to large water flows, although they drink from rivers and smaller streams. This is why the names of various communities end in <i>ken</i> which means “mouth” as in river mouth. The only large community farther away from a principal river is Santa Teresita de Kavanayen, and its settlement can be traced to the influence of a Capuchin mission.</p> <p>There are small communities composed of a single family group and even the big ones can be dominated by a small number of families (Castro in Kamoirán, Lanz and López in Kavanayen, Ayuso in San Ignacio and Púraitepü, Franco and Gomez in Kumarakapai). Inside the park there are about 95 indigenous communities with more than 8,000 inhabitants (Huber and Febres, 2000). Each community has a variable area of influence not clearly established. Some communities are inside the area of influence of others such as San Ignacio which is inside the area of San Francisco de Yuruaní or Agua Fría inside that of Santa Cruz de Mapaurí. They hold discussions about boundaries of areas of influence for each community, such as Morok Meru, considered by Mapaurí, Manak Krü and Agua Fría to be part of their areas of influence. The biggest communities, such as San Francisco and San Ignacio de Yuruaní, San Juan and San Rafael de Kamoirán, Kavanayén, Kamarata, Mapaurí, Púraitepü de Roraima, Canaima and Urimán, among others, enjoy basic services such as electricity, water, school, and a small clinic, normally managed by a nurse. Only San Ignacio de Yuruaní, Kavanayén and Canaima have permanent doctors, which still must deal with deficient services and population growth. In almost all the abovementioned communities, with the exception of Mapaurí and Púraitepü, there are rural houses similar to those found in the rest of the country or with one less room such as those built by the Edo. Bolívar government. The traditional architecture persists especially outside of Troncal 10’s influence; although, Catholic missions have also exerted their influence, such as in Kavanayén, Wonken and Kamarata.</p> <p>With respect to solid waste, the impact in the indigenous communities is proportional to their size. Smaller communities discharge their organic waste in forests or scrubland. This habit persists in larger communities where septic tanks have collapsed and trash is scarce. In the largest communities, there is evidence of a solid waste management problem. Some communities, such as Kamarata, Wonken, Canaima and Kavanayen, have “land fills” without appropriate management; communities along the road enjoy garbage service provided by the Great Savannah Municipality where trucks take trash to the sanitary landfill in Santa Elena de Uairén.</p> <p>Currently the CVG advises the municipality in order to improve its trash service in the park and the rest of the municipality. There are water treatment plans in the Luepa and San Ignacio de Yuruaní camps, as well as in Hoturvensa en Canaima camp.</p> <p>In 2000, the Wonken Mission built a biodigestor and in 2001 built around more in Santa Elena de Uairén. These experiences could be considered alternatives for organic waste management inside the park.</p>

Source: www.exoticamazon.com

TYPE OF VALUE	SITE VALUE	RELATIONSHIP WITH SPECIFIC OBJECTIVES OF THE AREA (see criteria ¹):	LINKAGE WITH SELECTION CRITERIA AS A WHS	DESCRIPTION OF THE VALUE
CULTURAL AND ECONOMIC VALUES	10. Zones of touristic interest	3, 4, 5, 6	I, II, II	<p>These zones include a diversity of sites within the park that currently concentrate visitation around pools, waterfalls, centers, and communities with touristic services (hotels, restaurants, telephones, medical services, gas stations, and air strips, and others.) or are found along tour routes.</p> <p>On the western side of the park, sites can be found around AuyanTepuy: Canaima Lagoon, Kamarata, Kavak, Uruyen, Kamadak, camping along the Carrao River and Angel Falls. Visitors reach these sites principally via the Canaima airport (one of two paved runways in the park, the other is in Luepa), where flights go to the Kamarata sector, with frequent direct flights also to Kavak, Uruyen and Kamarata from Ciudad Bolívar or Santa Elena de Uairén. Kamarata, Kavak and Uruyen can be reached by ground and the three sites have airstrips and radio equipment.</p> <p>On the eastern side, principal tourist sites are found near Troncal 10, along the road to Kavanayen and en route to Roraima. In Troncal 10 the sites, from north to south, are Aponwao, Kamoiran Rapids, Anawai and Kawi Waterfalls (which are outside the park but can be reached from the park), Uroi Warai, Kama, Arapan (Pacheco), Sarowape (or Suruape), Yuruani River (Arepera Waterfall), Kumarakapay (San Francisco), Rue Meru (found a short distance off the main road), Kako (Jaspe Brook) el Mirador (the highest point along the highway on this part of the eastern sector) and Agua Fría Waterfall. On the road to Kavanayen the principal sites include San Luis de Avarkay, Torón Waterfall, Iboribo (or Liwo-Riwo), Aponwao Waterfall, Chivatón, Mantopay, Kavanayen and Karuai Waterfall. On the route toward Roraima the interesting site begins with the the community in Püraitepü. Tourist vehicles stop here, which is also the place where guides and porters can be hired to go to Roraima</p>
				Photo: M. Morales

OBJECTIVES OF CANAIMA NATIONAL PARK

The following objectives come from the Land Use Plan and Regulations for the Eastern Sector of CNP, Decree 1640 (5 June 1991), since they do not appear in the decree that established the park.

The park's management plan was based on these objectives.

GENERAL OBJECTIVE

Preserve and conserve the important environmental values found in the park's ecosystems.

SPECIFIC OBJECTIVES

1. Preserve ecosystem structure, avoiding irreversible alterations to the dominant types of vegetation in different landscapes: savannah, forests, scrubland, morichales and tepuyes.
2. Conserve the genetic resources of wild flora and fauna, especially endemic, threatened, and species in danger of extinction.
3. Maintain at their natural levels animal and plant communities, biodiversity in general.
4. Preserve the quality of the Great Savannah landscape and exceptional scenic values such as tepuyes, waterfalls, natural river pools, undulating savannahs and other vegetative formations.
5. Protect the Pemon cultural values, their settlements, and traditions.
6. Maintain watershed stability, protecting waterways that drain the basin.

TOOL 2. SITE THREATS AND PRESSURES

A contextual analysis of Canaima reveals pressures that threaten its integrity, resources, and values. Nevertheless, in general terms, the principal pressures are directed at the composition and continuity of habitats in specific locations in the park that tend to be diluted given its large area.

Similarly, the sources of these pressures correlate with the transformation of land uses by indigenous populations and the uncontrolled expansion of visitor activities.

In 2002, the IoH methodology (Hockings *et al.* 2002) identified threats and pressures to selected values in CNP, defined as the following: the chosen values (biological, ecological, and others) at the species level and other groups that are conservation elements to be evaluated.

Eleven site values were identified: savannah-forest ecotone, Tepuyan formations, morichales, gallery forest, bushes on rocks, threatened species, and degraded habitats, water, grasses and bushes on turbas, and tourism zones, human settlements, and areas of resources utilization by local communities.

Each of these site values was rated as low, medium, high, and very high. Their corresponding threats and pressures were recorded on Worksheets 2a, 2b, 2c, 2d, 2e, 2f, 2h, 2i for Tool 2. This generates a ranking for each threat and pressure, which together reveals a global view of threats in the park.

The Second Evaluation Workshop on the Management Effectiveness of Canaima National Park addressed the threats to the values identified in the IoH Project, based on the work done in 2002 and documented in Worksheet 2a. Indigenous groups requested to do the threat analysis independent of other participants. Thus, there are two threat analyses.

This evaluation ranked threats as very high, high, medium, and low. Worksheet 2b offers a table of threats ranked by indigenous communities ordered according to the ranking while Worksheet 2c offers the same table but ordered by type of threat. Worksheet 2d presents the table constructed by other participants ordered according to the ranking and Worksheet 2e offers the same table but ordered by type of threat. Data in the matrices were analyzed in a plenary session of all workshop participants, and Worksheet 2f has a summary table of the global threat rankings comparing results of the indigenous communities with those of other participants. It further generates a “consensus” ranking of both. Worksheet 2g presents a table comparing the threat level to each site value according to indigenous communities and other participants. The table again generates a “consensus” ranking.

Worksheet 2h offers a summary of threat rankings comparing 2002 results to those of 2007. Worksheet 2i then presents a comparative summary of the threat level for each site value for both 2002 and 2007.

In order to analyze results, threats were classified according to several variables: administrative, effect on natural resources, touristic and related activities, population growth in the zone, and services that derive from this growth. In this way, the results indicate that according to type of threats, the most important were those related to the effect on natural resources and touristic activities. Worksheets 2a, 2b, 2c, 2d, and 2e show rankings of each threat as well as global rankings, as determined by indigenous communities and participating institutions.

It should be mentioned that according to the methodology, the threat ranking to a national park should never be less than the highest individual threat ranking associated with a particular source of pressure. For example, if any threat associated with a source of pressure has a ranking of high, the ranking of the system threat will also be high. The same methodology is applied in the calculation of the global ranking for principal conservation objects.



Work groups (Photos: C. Cario)

Worksheet 2f shows the global rankings for each threat. The results indicate that the most important current threats in Canaima ranked as very high by both indigenous communities and other institutions are fire, touristic activities, rock extraction for construction materials in areas such as Kavanayen and Urowarai, and metal and non-metal mining in areas surrounding the park. Indigenous communities consider agriculture a very high threat while other institutions rank it as high. The threats ranked as high by both include lack of park management policies, absence of site plans, lack of population growth policies, absence of management plans, logging, harvesting, subsistence hunting, cattle ranching, defaming of sites, bioprospecting in order to patent products and processes derived from biodiversity, damage to fragile environments, absence of profitable, economic alternatives to tourism, population growth and concentration, commercialization of traditional products, roads, access to basic services, discharges into aquatic systems, and lack of black water treatment systems. Those with a medium ranking include commercial extraction of species. Low ranked threats are loans for construction material, commercial extraction of species, and fishing.

Worksheet 2g presents a comparative summary of threat levels for each site value, where more than half of the values are ranked very high, such as the savannah-forest ecotone, the morichales, gallery forest, water, human settlements, and tourism zones.

Given the high number of threats identified in the park (27), it was not possible to do a more detailed analysis, which would have involved the evaluation of their reach and severity (as the tool in activity 2 of *The World Heritage Management Effectiveness Workbook: Edition 2007*).

Two additional threats to those studied in 2004 were analyzed: solid waste and bioprospecting. Both threats are assigned a very high ranking.

The comparative threat analysis in 2004 and 2007 lend themselves generally to conclude that the great majority of threats have increased in severity, rising from low and medium to

high and very high. In 2004 only two threats were rated as very high (fire and touristic activities) and four as high (lack of population growth policies, agriculture, cattle ranching, and access to basic services). Of the 27 threats evaluated in 2007, five are currently considered very high, 19 high, and only three low. Only two threats remained low: commercial extraction of species and fishing. Loans for construction materials are the only threat to go down, from medium to low.

As a result of the Second Evaluation Workshop on the Management Effectiveness of Canaima National Park and meetings with INPARQUES and other project partners, there now exists a field form for protected areas monitoring to evaluate each of the aspects in the evaluation (social, administrative, natural and cultural resources, political, legal, and financial-economic) with indicators, reviewed evidence, and a ranking from 1 to 5 for each (1 the minimum, 5 maximum). This document presents the results obtained from the 2004 workshop in Canaima and contrasts them with those of 2007 (Annex 1).



Plenary session (Photo: C. Cario)

The results of Worksheet 2j were derived from Worksheets 2a-2i, where the most important threats to the park are described:

1. Fire
2. Environmentally damaging agricultural practices
3. Poorly managed tourism
4. Mining
5. Solid waste
6. Absence of policies to manage population growth and access to basic services that address water contamination.

WORKSHEET 2a FOR TOOL 2. Summary of site value threats, 2002

Summary of threats to Principal Conservation Objects	Tepuyan Formations	Savannah-forest Ecotone	Morichales	Gallery Forest	Threatened species, and degraded habitats	Water (Volume and quality)	Grasses and bushes on turbas	Zones of touristic interest	Areas of resources utilization by local communities	Human Settlements	Hierarchical global ranking of the threat
Lack of population growth policies	-							-	-	High	High
Access to basic services	-							-	-	High	High
Agriculture	Low	High		High				-	Medium	-	High
Fire	Low	High	Very High	High	High		Low	-	Medium	-	Very High
Lack of management plans								Low	Medium		Medium
Absence of site plans	Low							Medium	-	-	Medium
Population growth and concentration	Low					Low		-	Medium	-	Medium
Commercialization of traditional products								-	Medium	-	Medium
Lack of park's comprehensive management policies								Low		-	Low
Inadequate regulation plan								Low		-	Low
Absence of a management plan								Low		-	Low
Tourists/visitors activities	Medium		Very High	Medium		Low		Low		-	Very High
Absence of profitable, economic alternatives to tourism	Low	Medium						Low		-	Medium
Fishing	-		Low						Low	-	Low
Use of non traditional fishing practices and motors						Low			Low		Low

Summary of threats to Principal Conservation Objects	Tepuyan Formations	Savannah-forest Ecotone	Morichales	Gallery Forest	Threatened species, and degraded habitats	Water (Volume and quality)	Grasses and bushes on turbas	Zones of touristic interest	Areas of resources utilization by local communities	Human Settlements	Hierarchical global ranking of the threat
Subsistence hunting	Low	Low		Low	Medium				Low	-	Medium
Harvesting									Low	-	Low
Problems between Edelca and communities	Low										Low
Logging		Low				Low					Low
Cattle ranching		High									Alto
Subsistence use by indigenous groups			Low								Low
Mining			Medium			Medium					Medium
Extraction of species with commercial purposes			Low	Low	Low				Low		Low
Extraction of rocks for construction materials							Medium				Medium
Roads					Medium		Medium				Medium
Financial loans					Medium						Medium
Damage to fragile environments					Medium						Medium
Discharge into aquatic systems						Medium					Medium
Lack of black water treatment systems						Low					Low
Visitors	Medium										Medium
Defaming of sites	Low										Low
Status of the threat to the principal conservation objects and the entire site	Medium	High	Very High	High	High	Medium	Medium	Medium	Medium	High	

WORKSHEET 2b FOR TOOL 2. Summary of Threats to Site Values in Canaima National Park, Identified by communities in Sectors 2, 4 and 5.

	Summary of threats to Principal Conservation Objects	Savannah-forest Ecotone	Morichales	Gallery Forests	Water (Volume and quality)	Human Settlements	Zones of touristic interest	Grasses and bushes on turbas	Areas of resources utilization by local communities	Tepuyan Formations	Threatened species, and degraded habitats	Bushes on rocks	Hierarchical global ranking of the threat
1	Agriculture	Very High	Low	Very High	Medium	Does not apply	Does not apply	Does not apply	Medium	Low	Does not apply	No answer	Very High
2	Fire	Very High	Very High	High	Didn't find consensus	-	High	Low	Medium	Medium	High	No answer	Very High
3	Tourists/visitors activities	Does not apply	Very High	Medium	Medium	High	High	Does not apply	Low	High	Does not apply	No answer	Very High
4	Mining (non-metals and metals, in surrounding sites at CNP)	Does not apply	Medium	Does not apply	Very High	Does not apply	Low	Does not apply	Does not apply	Does not apply	Does not apply	No answer	Very High
5	Extraction of rocks for construction materials in Kavanayen y Urowarai	Does not apply	Does not apply	Does not apply	Does not apply	Very High	Does not apply	No answer	Does not apply	Does not apply	Does not apply	Medium	Very High
6	Solid waste	Low	Low	Low		High	High	Low	Low	High	Low	Low	High
7	Lack of park's comprehensive management policies	High	High	High	High	High	High	High	High	High	High	No answer	High
8	Absence of site plans	High	Medium	Medium	High		High	Low	High	Low	High	No answer	High
9	Population growth and concentration	High	Medium	Low	Low	High	High	Does not apply	High	Low	Medium	No answer	High
10	Damage to fragile environments	Low	Low	Does not apply	Does not apply	High	High	Does not apply	High	High	Medium	No answer	High
11	Logging	High	High	High	Medium	Does not apply	Low	Does not apply	Does not apply	Does not apply	Medium	No answer	High
12	Roads	Does not apply	High	Low	Does not apply	Does not apply	Does not apply	High	Does not apply	Does not apply	Medium	No answer	High
13	Lack of management plans	Low	Low	Low	Didn't find consensus	High	Low	Low	Medium	High	Low	No answer	High
14	Commercialization of traditional products	Does not apply	High	Low	Does not apply	Does not apply	Does not apply	Does not apply	High	Does not apply	Does not apply	No answer	High
15	Lack of population growth policies	No answer	No answer	No answer	No answer	High	No answer	No answer	No answer	No answer	No answer	No answer	High

	Summary of threats to Principal Conservation Objects	Savannah-forest Ecotone	Morichales	Gallery Forests	Water (Volume and quality)	Human Settlements	Zones of touristic interest	Grasses and bushes on turbas	Areas of resources utilization by local communities	Tepuyan Formations	Threatened species, and degraded habitats	Bushes on rocks	Hierarchical global ranking of the threat
16	Access to basic services	No answer	No answer	No answer	No answer	High	No answer	No answer	No answer	No answer	No answer	No answer	High
17	Subsistence hunting	Medium	High	Medium	Does not apply	Does not apply	Medium	Does not apply	Medium	Low	Medium	No answer	High
18	Harvesting	Low	High	Medium	Does not apply	Does not apply	Does not apply	Does not apply	Medium	Does not apply	Does not apply	No answer	High
19	Cattle ranching	High	Low	Does not apply	Low	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Low	No answer	High
20	Discharge into aquatic systems	Does not apply	Does not apply	Does not apply	Medium	High	Medium	Does not apply	Does not apply	Does not apply	Does not apply	No answer	High
21	Lack of black water treatment systems	Does not apply	Does not apply	Does not apply	Low	Does not apply	High	Does not apply	Does not apply	Does not apply	Does not apply	No answer	High
22	Defaming of sites	Does not apply	Does not apply	Does not apply	Low	Does not apply	Does not apply	Does not apply	Does not apply	High	Does not apply	No answer	High
23	Bioprospecting in order to patent products and processes derived from biodiversity	No answer	No answer	No answer	No answer	No answer	No answer	No answer	No answer	High	No answer	No answer	High
24	Absence of profitable, economic alternatives to tourism	Medium	Medium	Medium	Medium	Medium	Medium	Low	Medium	Medium	Medium	No answer	Medium
25	Fishing	Does not apply	Low	Does not apply	Low	Does not apply	Does not apply	Does not apply	Low	Does not apply	Does not apply	No answer	Low
26	Extraction of species with commercial purposes	Low	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Low		Low	No answer	Low
27	Loans to acquire construction materials	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Low	No answer	Low
	Status of the threat to the management objectives and the entire site	Very high	Very high	Very high	Very high	Very high	High	High	High	High	High	Medium	

WORKSHEET 2c FOR TOOL 2. Summary of Threats to Site Values in Canaima National Park, Identified by communities in Sectors 2, 4 and 5.

Type of threat		Summary of threats to Principal Conservation Objects	Savannah-forest Ecotone	Morichales	Gallery Forest	Water (Volume and quality)	Human Settlements	Zones of touristic interest	Grasses and bushes on turbas	Areas of resources utilization by local communities	Tepuyan Formations	Threatened species, and degraded habitats	Bushes on rocks	Hierarchical global ranking of the threat
Administrative	1	Lack of park's comprehensive management policies	High	High	High	High	High	High	High	High	High	High	No answer	High
	2	Absence of site plans	High	Medium	Medium	High		High	Low	High	Low	High	No answer	High
	3	Lack of population growth policies	No answer	No answer	No answer	No answer	High	No answer	No answer	No answer	No answer	No answer	No answer	High
	4	Lack of management plans	Low	Low	Low	Didn't reach consensus	High	Low	Low	Medium	High	Low	No answer	High
Impact on Natural Resources	5	Fire	Very high	Very high	High	Didn't reach consensus	-	High	Low	Medium	Medium	High	No answer	Very high
	6	Agriculture	Very high	Low	Very high	Medium	Does not apply	Does not apply	Does not apply	Medium	Low	Does not apply	No answer	Very high
	7	Mining (non-metals and metals, in surrounding sites at CNP)	Does not apply	Medium	Does not apply	Very high	Does not apply	Low	Does not apply	Does not apply	Does not apply	Does not apply	No answer	Very high
	8	Extraction of rocks for construction materials in Kavanayen y Urowarai	Does not apply	Does not apply	Does not apply	Does not apply	Very high	Does not apply	No answer	Does not apply	Does not apply	Does not apply	Medium	Very high
	9	Logging	High	High	High	Medium	Does not apply	Low	Does not apply	Does not apply	Does not apply	Medium	No answer	High
	10	Harvesting	Low	High	Medium	Does not apply	Does not apply	Does not apply	Does not apply	Medium	Does not apply	Does not apply	No answer	High
	11	Subsistence hunting	Medium	High	Medium	Does not apply	Does not apply	Medium	Does not apply	Medium	Low	Medium	No answer	High
	12	Cattle ranching	High	Low	Does not apply	Low	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Low	No answer	High
	13	Defaming of sites	Does not apply	Does not apply	Does not apply	Low	Does not apply	Does not apply	Does not apply	Does not apply	High	Does not apply	No answer	High
	14	Bioprospecting in order to patent products and processes derived from biodiversity	No answer	No answer	No answer	No answer	No answer	No answer	No answer	No answer	High	No answer	No answer	High
	15	Fishing	Does not apply	Low	Does not apply	Low	Does not apply	Does not apply	Does not apply	Low	Does not apply	Does not apply	No answer	Low

Type of threat		Summary of threats to Principal Conservation Objects	Savannah-forest Ecotone	Morichales	Gallery Forest	Water (Volume and quality)	Human Settlements	Zones of touristic interest	Grasses and bushes on turbas	Areas of resources utilization by local communities	Tepuyan Formations	Threatened species, and degraded habitats	Bushes on rocks	Hierarchical global ranking of the threat
	16	Extraction of species with commercial purposes	Low	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Low		Low	No answer	Low
Tourism and related activities	17	Tourists/visitors activities	Does not apply	Very High	Medium	Medium	High	High	Does not apply	Low	High	Does not apply	No answer	Very High
	18	Solid waste	Low	Low	Low		High	High	Low	Low	High	Low	Low	High
	19	Damage to fragile environments	Low	Low	Does not apply	Does not apply	High	High	Does not apply	High	High	Medium	No answer	High
	20	Absence of profitable, economic alternatives to tourism	Medium	Medium	Medium	Medium	Medium	Medium	Low	Medium	Medium	Medium	No answer	Medium
Population	21	Population growth and concentration	High	Medium	Low	Low	High	High	Does not apply	High	Low	Medium	No answer	High
	22	Commercialization of traditional products	Does not apply	High	Low	Does not apply	Does not apply	Does not apply	Does not apply	High	Does not apply	Does not apply	No answer	High
Services	23	Roads	Does not apply	High	Low	Does not apply	Does not apply	Does not apply	High	Does not apply	Does not apply	Medium	No answer	High
	24	Access to basic services	No answer	No answer	No answer	No answer	High	No answer	No answer	No answer	No answer	No answer	No answer	High
	25	Discharge into aquatic systems	Does not apply	Does not apply	Does not apply	Medium	High	Medium	Does not apply	Does not apply	Does not apply	Does not apply	No answer	High
	26	Lack of black water treatment systems	Does not apply	Does not apply	Does not apply	Low	Does not apply	High	Does not apply	Does not apply	Does not apply	Does not apply	No answer	High
	27	Loans to acquire construction materials	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Low	No answer
Status of the threat to the management objectives and the entire site			Muy alto	Muy alto	Very High	Very High	Very High	Very High	Very High	High	High	High	High	High

WORKSHEET 2d FOR TOOL 2. Summary of Threats to Site Values in Canaima National Park, Identified by partner institutions.

	Summary of threats to Principal Conservation Objects	Savannah-forest Ecotone	Morichales	Water (Volume and quality)	Human Settlements	Zones of touristic interest	Threatened species, and degraded habitats	Tepuyan Formations	Grasses and bushes on turbas	Areas of resources utilization by local communities	Bushes on rocks	Gallery Forests	Hierarchical global ranking of the threat
1	Fire	Very High	Very High	Didn't find consensus	-	High	High	Medium	Low	Medium	No answer	High	Very High
2	Mining (non-metals and metals, in surrounding sites at CNP)	Does not apply	Medium	Very High	Does not apply	Low	Does not apply	Does not apply	Does not apply	Does not apply	No answer	Does not apply	Very High
3	Tourists/visitors activities	Does not apply	Very High	Medium	High	High	Does not apply	High	Does not apply	Low	No answer	Medium	Very High
4	Extraction of rocks for construction materials in Kavanayen y Urowarai	Does not apply	Does not apply	Does not apply	Very High	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Medium	Does not apply	Very High
5	Solid waste	Low	Low		High	High	Low	High	Low	Low	Low	Low	High
6	Lack of management plans	High	High	High	High	High	High	High	High	High	No answer	High	High
7	Lack of park's comprehensive management policies	High	High	High	High	High	High	High	High	High	No answer	High	High
8	Damage to fragile environments	Low	Low	Does not apply	High	High	Medium	High	Does not apply	High	No answer	Does not apply	High
9	Population growth and concentration	Does not apply	Does not apply	Medium	High	High	Does not apply	Does not apply	Does not apply	High	No answer	Does not apply	High
10	Lack of black water treatment systems	Does not apply	Does not apply	Low	High	High	Does not apply	Does not apply	Does not apply	High	No answer	Does not apply	High
11	Logging	High	High	Medium	Does not apply	Low	Medium	Does not apply	Does not apply	Does not apply	No answer	High	High
12	Agriculture	High	Low	Medium	Does not apply	Does not apply	Does not apply	Low	Does not apply	Medium	No answer	High	High
13	Commercialization of traditional products	Medium	High	Does not apply	Does not apply	Does not apply	Does not apply	Low	Does not apply	High	No answer	Does not apply	High
14	Roads	Does not apply	High	Does not apply	Does not apply	Does not apply	Medium	Does not apply	High	Does not apply	No answer	Low	High
15	Discharge into aquatic systems	Does not apply	Does not apply	Medium	High	Medium	Does not apply	High	Does not apply	Does not apply	No answer	Does not apply	High

	Summary of threats to Principal Conservation Objects	Savannah-forest Ecotone	Morichales	Water (Volume and quality)	Human Settlements	Zones of touristic interest	Threatened species, and degraded habitats	Tepuyan Formations	Grasses and bushes on turbas	Areas of resources utilization by local communities	Bushes on rocks	Gallery Forests	Hierarchical global ranking of the threat
16	Lack of population growth policies	No answer	No answer	No answer	High	No answer	No answer	No answer	No answer	No answer	No answer	No answer	High
17	Access to basic services	Does not apply	Does not apply	Does not apply	High	No answer	Does not apply	Does not apply	Does not apply	No answer	Does not apply	Does not apply	High
18	Cattle ranching	High	Low	Low	Does not apply	Does not apply	Low	Medium	Does not apply	Does not apply	No answer	Does not apply	High
19	Defaming of sites	Does not apply	Does not apply	Low	Does not apply	Does not apply	Does not apply	High	Does not apply	Does not apply	No answer	Does not apply	High
20	Subsistence hunting	Medium	High	Does not apply	Does not apply	Medium	Medium	Low	Does not apply	Medium	No answer	Medium	High
21	Harvesting	Low	High	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Medium	No answer	Medium	High
22	Absence of profitable, economic alternatives to tourism	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Low	High	No answer	Medium	High
23	Bioprospecting in order to patent products and processes derived from biodiversity	No answer	No answer	No answer	No answer	No answer	No answer	High	No answer	No answer	No answer	No answer	High
24	Absence of site plans	Does not apply	Does not apply	Does not apply	Don't exist	Low	Does not apply	Low	Low	Does not apply	No answer	Does not apply	Low
25	Loans to acquire construction materials	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Low	Does not apply	Does not apply	Does not apply	No answer	Does not apply	Low
26	Fishing	Does not apply	Low	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Low	No answer	Does not apply	Low
27	Extraction of species with commercial purposes	Low	Does not apply	Does not apply	Does not apply	Does not apply	Low		Does not apply	Low	No answer	Does not apply	Low
	Status of the threat to the management objectives and the entire site	Very High	Very High	Very High	Very High	High	High	High	High	High	Medium	Medium	

WORKSHEET 2e FOR TOOL 2. Summary of Threats to Site Values in Canaima National Park, Identified by partner institutions.

Type of Threat		Summary of threats to Principal Conservation Objects	Savannah-forest Ecotone	Morichales	Water (Volume and quality)	Human Settlements	Zones of touristic interest	Threatened species, and degraded habitats	Tepuyan Formations	Grasses and bushes on turbas	Areas of resources utilization by local communities	Bushes on rocks	Gallery Forests	Hierarchical global ranking of the threat	
Administrative	1	Lack of park's comprehensive management policies	High	High	High	High	High	High	High	High	High	No answer	High	High	
	2	Absence of site plans	High	High	High	High	High	High	High	High	High	No answer	High	High	
	3	Lack of population growth policies	No answer	No answer	No answer	High	No answer	No answer	No answer	No answer	No answer	No answer	No answer	No answer	High
	4	Lack of management plans	Does not apply	Does not apply	Does not apply	Do not exist	Low	Does not apply	Low	Low	Does not apply	No answer	Does not apply	Low	
Impact on Natural Resources	5	Fire	Very High	Very High	Didn't find consensus	-	High	High	Medium	Low	Medium	No answer	High	Very High	
	6	Mining (non-metals and metals, in surrounding sites at CNP)	Does not apply	Medium	Very High	Does not apply	Low	Does not apply	Does not apply	Does not apply	Does not apply	No answer	Does not apply	Very High	
	7	Extraction of rocks for construction materials in Kavanayen y Urowarai	Does not apply	Does not apply	Does not apply	Very High	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Medium	Does not apply	Very High	
	8	Logging	High	High	Medium	Does not apply	Low	Medium	Does not apply	Does not apply	Does not apply	No answer	High	High	
	9	Cattle ranching	High	Low	Low	Does not apply	Does not apply	Low	Medium	Does not apply	Does not apply	No answer	Does not apply	High	
	10	Agriculture	High	Low	Medium	Does not apply	Does not apply	Does not apply	Low	Does not apply	Medium	No answer	High	High	
	11	Harvesting	Low	High	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Medium	No answer	Medium	High	
	12	Subsistence hunting	Medium	High	Does not apply	Does not apply	Medium	Medium	Low	Does not apply	Medium	No answer	Medium	High	
	13	Defaming of sites	Does not apply	Does not apply	Low	Does not apply	Does not apply	Does not apply	High	Does not apply	Does not apply	No answer	Does not apply	High	
	14	Bioprospecting in order to patent products and processes derived from biodiversity	No answer	No answer	No answer	No answer	No answer	No answer	High	No answer	No answer	No answer	No answer	No answer	High

Type of Threat		Summary of threats to Principal Conservation Objects	Savannah-forest Ecotone	Morichales	Water (Volume and quality)	Human Settlements	Zones of touristic interest	Threatened species, and degraded habitats	Tepuyan Formations	Grasses and bushes on turbas	Areas of resources utilization by local communities	Bushes on rocks	Gallery Forests	Hierarchical global ranking of the threat
Impact on Natural Resources	15	Extraction of species with commercial purposes	Low	Does not apply	Does not apply	Does not apply	Does not apply	Low		Does not apply	Low	No answer	Does not apply	Low
	16	Fishing	Does not apply	Low	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Low	No answer	Does not apply	Low
Tourism and related activities	17	Tourists/visitors activities	Does not apply	Very High	Medium	High	High	Does not apply	High	Does not apply	Low	No answer	Medium	Very High
	18	Solid waste	Low	Low		High	High	Low	High	Low	Low	Low	Low	High
	19	Damage to fragile environments	Low	Low	Does not apply	High	High	Medium	High	Does not apply	High	No answer	Does not apply	High
	20	Absence of profitable, economic alternatives to tourism	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Low	High	No answer	Medium
Population	21	Population growth and concentration	Does not apply	Does not apply	Medium	High	High	Does not apply	Does not apply	Does not apply	High	No answer	Does not apply	High
	22	Commercialization of traditional products	Medium	High	Does not apply	Does not apply	Does not apply	Does not apply	Low	Does not apply	High	No answer	Does not apply	High
Services	23	Discharge into aquatic systems	Does not apply	Does not apply	Medium	High	Medium	Does not apply	High	Does not apply	Does not apply	No answer	Does not apply	High
	24	Roads	Does not apply	High	Does not apply	Does not apply	Does not apply	Medium	Does not apply	High	Does not apply	No answer	Low	High
	25	Access to basic services	Does not apply	Does not apply	Does not apply	High	No answer	Does not apply	Does not apply	Does not apply	No answer	Does not apply	Does not apply	High
	26	Lack of black water treatment systems	Does not apply	Does not apply	Low	High	High	Does not apply	Does not apply	Does not apply	High	No answer	Does not apply	High
	27	Loans to acquire construction materials	Does not apply	Does not apply	Does not apply	Does not apply	Does not apply	Low	Does not apply	Does not apply	Does not apply	No answer	Does not apply	Low
Status of the threat to the management objectives and the entire site			Very High	Very High	Very High	Very High	High	High	High	High	High	Medium	Medium	

WORKSHEET 2f FOR TOOL 2. Comparative Summary of Type of Threats on Canaima National Park, made by Partner Institutions and Indigenous Communities.

Type of Threat		Summary of threats to Principal Conservation Objects	Hierarchical global ranking of the threat according to communities from sectors 2, 4 and 5	Hierarchical global ranking of the threat according to the Institutions	Ranking by Consensus 2007. Communities and Institutions
Administrative	1	Lack of park's comprehensive management policies	High	High	High
	2	Absence of site plans	High	High	High
	3	Lack of population growth policies	High	High	High
	4	Lack of management plans	High	Low	High
Impact on Natural Resources	5	Fire	Very High	Very High	Very High
	6	Mining (non-metals and metals, in surrounding sites at CNP)	Very High	Very High	Very High
	7	Extraction of rocks for construction materials in Kavanayen y Urowarai	Very High	Very High	Very High
	8	Agriculture	Very High	High	Very High
	9	Logging	High	High	High
	10	Harvesting	High	High	High
	11	Subsistence hunting	High	High	High
	12	Cattle ranching	High	High	High
	13	Defaming of sites	High	High	High
	14	Bioprospecting in order to patent products and processes derived from biodiversity	High	High	High
	15	Extraction of species with commercial purposes	Low	Low	Low
	16	Fishing	Low	Low	Low
Tourism and related activities	17	Tourists/visitors activities	Very High	Very High	Very High
	18	Solid waste	High	High	High
	19	Damage to fragile environments	High	High	High
	20	Absence of profitable, economic alternatives to tourism	Medium	High	High
Population	21	Population growth and concentration	High	High	High
	22	Commercialization of traditional products	High	High	High
Services	23	Roads	High	High	High
	24	Access to basic services	High	High	High
	25	Discharge into aquatic systems	High	High	High
	26	Lack of black water treatment systems	High	High	High
	27	Loans to acquire construction materials	Low	Low	Low

WORKSHEET 2g FOR TOOL 2. Comparative Summary of Level of Threats for each of the Site Values of Canaima National Park, made by Partner Institutions and Indigenous Communities.

Status of the threat to the PCO and the entire site	Principal Conservation Objects (PCO)	Savannah-forest Ecotone	Morichales	Gallery Forest	Water (Volume and quality)	Human Settlements	Zones of touristic interest	Grasses and bushes on turbas	Areas of resources utilization by local communities	Tepuyan Formations	Threatened species, and degraded habitats	Bushes on rocks
	Indigenous communities	Very High	Very High	Very High	Very High	Very High	High	High	High	High	High	Medium
	Institutions	Very High	Very High	Very High	Very High	Very High	High	High	High	High	Medium	Medium
	Ranking by Consensus 2007. Communities and Institutions	Very High	Very High	Very High	Very High	Very High	High	High	High	High	High	Medium

WORKSHEET 2h FOR TOOL 2. Comparative Summary of Threats on Canaima National Park, years 2002 and 2007.

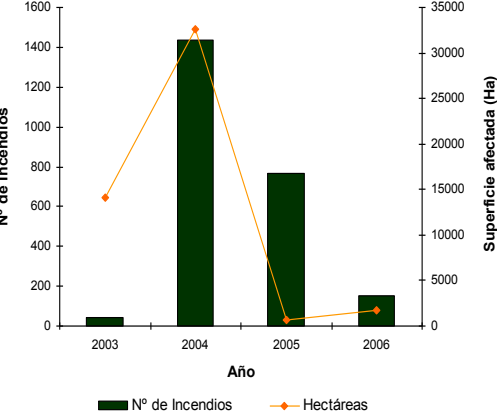
Type of Threat	Summary of threats to Principal Conservation Objects	Hierarchical global ranking of the threat in 2002	Hierarchical global ranking of the threat in 2007	
Administrative	1	Lack of park's comprehensive management policies	Low	High
	2	Absence of site plans	Medium	High
	3	Lack of population growth policies	High	High
	4	Lack of management plans	Medium	High
Impact on Natural Resources	5	Fire	Very High	Very High
	6	Mining (non-metals and metals, in surrounding sites at CNP)	Medium	Very High
	7	Extraction of rocks for construction materials in Kavanayen y Urowarai	Medium	Very High
	8	Agriculture	High	Very High
	9	Logging	Low	High
	10	Harvesting	Low	High
	11	Subsistence hunting	Medium	High
	12	Cattle ranching	High	High
	13	Defaming of sites	Low	High
	14	Bioprospecting in order to patent products and processes derived from biodiversity	Was not evaluated	High
	15	Extraction of species with commercial purposes	Low	Low
	16	Fishing	Low	Low
Tourism and related activities	17	Tourists/visitors activities	Very High	Very High
	18	Solid waste	Was not evaluated	High
	19	Damage to fragile environments	Medium	High
	20	Absence of profitable, economic alternatives to tourism	Medium	High
Population	21	Population growth and concentration	Medium	High
	22	Commercialization of traditional products	Medium	High
Services	23	Roads	Medium	High
	24	Access to basic services	High	High
	25	Discharge into aquatic systems	Medium	High
	26	Lack of black water treatment systems	Low	High
	27	Loans to acquire construction materials	Medium	Low

WORKSHEET 2i FOR TOOL 2. Comparative Summary of Level of Threats for each of the Site Values of Canaima National Park, years 2002 and 2007.

Status of the threat to the PCO and the entire site	Principal Conservation Objects (PCO)	Savannah-forest Ecotone	Morichales	Gallery Forest	Water (Volume and quality)	Human Settlements	Zones of touristic interest	Grasses and bushes on turbas	Areas of resources utilization by local communities	Tepuyan Formations	Threatened species, and degraded habitats	Bushes on rocks
	Hierarchical global ranking of the threat in 2002	High	Very High	High	Medium	High	Medium	Medium	Medium	Medium	High	Was not evaluated
	Hierarchical global ranking of the threat in 2007	Very High	Very High	Very High	Very High	Very High	High	High	High	High	High	Medium

WORKSHEET 2j FOR TOOL 2. Threats and Pressures to CNP

Themes	Status according UNESCO's report, March 2002	March 2004	July 2007	Trends
Agriculture	Agriculture has not been reported as a direct threat to the park, but one of the pressures is land use change by residents.	Agriculture is ranked a high threat.	Agriculture is now ranked as a very high threat given the values for the savannah-forest ecotone and the gallery forest are very high.	Agriculture continues to be a threat to the park thanks to the Indigenous People's Act (currently under discussion in the National Assembly). That indigenous lands are not well delimited could be a future threat as well as development promoted by indigenous settlements.
Tourism	Development of unmanaged tourism constitutes a source of pressure.	Tourism is ranked a very high threat.	Tourism continues as a very high threat.	The national government promotes tourism in Canaima; nevertheless, the great majority of services are private.
Mining	Mining is not ranked as a threat inside or outside the park.	Mining is ranked a medium threat. In surrounding areas, mining is a high threat.	Mining (both metallic and non-metallic in adjacent areas to the park) is a very high threat.	Mining in adjacent areas continues; there exists a precedent for mining in forest reserves (Imataca case).

Themes	Status according UNESCO's report, March 2002	March 2004	July 2007	Trends															
Fire	<p>Fire was not reported directly. Nevertheless it was mentioned that the pressures referred to changes in habitat composition and continuity in specific locations that tend to be diluted given the size of the park.</p>	<p>Fire is a very high threat. In 2002 there were 52 reported fires, affecting 480.5 ha. These data are from INPARQUES given that Edelca managed its own program independently. Beginning in 2003 data from both were integrated into CVG-Edelca and INPARQUES's Fire Program.</p>	<p>Number of fires and area affected</p> <table border="1" data-bbox="1035 391 1423 529"> <thead> <tr> <th>Year</th> <th># Fires</th> <th>Area (Ha)</th> </tr> </thead> <tbody> <tr> <td>2003</td> <td>45</td> <td>14,172.35</td> </tr> <tr> <td>2004</td> <td>1,434</td> <td>32,598</td> </tr> <tr> <td>2005</td> <td>768</td> <td>672.75</td> </tr> <tr> <td>2006</td> <td>154</td> <td>1,677.04</td> </tr> </tbody> </table>  <p>Although the number of fires dropped from 768 in 2005 to 154 in 2006, the impact in the park according to the evaluation is very high.</p>	Year	# Fires	Area (Ha)	2003	45	14,172.35	2004	1,434	32,598	2005	768	672.75	2006	154	1,677.04	<p>To date the data indicate that fire frequency has been increasing (except in 2005). Nevertheless, according to Miguel Matany, coordinator of INPARQUES's Fire Program, since 2003 they have been counting fires in the park without attending to those fires, a situation that did not happen before. Currently there are problems with the way fire data are being collected. The recommendation is to combine data in order to have a more realistic view of the current situation.</p>
Year	# Fires	Area (Ha)																	
2003	45	14,172.35																	
2004	1,434	32,598																	
2005	768	672.75																	
2006	154	1,677.04																	

TOOL 3. RELATIONSHIPS WITH STAKEHOLDERS/PARTNERS

The first Enhancing Our Heritage report on Canaima (Real *et al.*,2002) described the characteristics of each partner at the time taking into consideration a variety of factors (economic dependence, positive and negative impacts, commitment, socio-political influence, organizational level). This effort helped to determine opportunities for generating partnerships that support the park management.

The methodology currently classifies stakeholders as residents, governmental and non-governmental organizations.

- Area residents principally include the Pemon people and the non-indigenous Creole communities.
- Governmental agencies include the National Parks Institute (INPARQUES), the Municipality of Great Savannah, the Bolivar state government, Venezuelan Corporation of Guayana, Caroni Electric Company (CVG-Edelca), armed forces (National Guard and Army), Ministry of the Environment, Ministry of Indigenous Groups (before called the Office of Indigenous Affairs in the Ministry of Education and Sports), Ministry of Agriculture and Lands, Ministry of Foreign Relations (Border Office), National Experimental University of Guayana (UNEG)
- Non-governmental environmental organizations: Center for the Integrated Development of Guayana (CEDIG), La Salle Foundation, The Nature Conservancy, Conservation International, Provita, and VITALIS.

Considering that effective management generally depends on stakeholder interest based on site values, participant institutional commitments were identified during the Second Evaluation Workshop on the Management Effectiveness of Canaima National Park. In order to accomplish this, the plenary used Tool 3 (stakeholder relations) from the management effectiveness workbook. To this end, participants identified their institutional commitments to two particular site values: **water and tourism zones**.

Worksheet 3a summarizes the institutional commitments to water while Worksheet 3b deals with tourism zones. Both use matrices to show the principal issues associated with corresponding values, such as economic dependence, identification of positive and negative stakeholder impacts for each value, and the possible impacts of site management on stakeholders. Finally stakeholder potential to commit to management, stakeholder organization to assume commitments, and the level of stakeholder commitment to the evaluated values were identified. The term “stakeholder” included all workshop participants (indigenous communities, NEUG, Environment Department of the Bolivar Government, INPARQUES, TNC, Ecodiversity, and VITALIS). Two institutions that could not participate in the workshop, CVG-Edelca and Conservation International, finished the matrices after the workshop. Worksheet 3c summarizes stakeholders’ engagement.

Because of a lack of time during the workshop, it was not possible to identify stakeholder commitment to the rest of the values for CNP: Tepuyan Formations, savannah-forest ecotone,

morichales, gallery forest, bushes on rocks, grasses and bushes on turbas, threatened species, and degraded habitats. Nevertheless Worksheet 3d presents INPARQUES's commitment to all these values, combined in this analysis as value a.

Worksheet 3a shows stakeholder commitments with respect to the value of water, where a great many participating institutions have various issues associated with water, although only a few are economically dependent on it. It is important to notice the positive impacts of all stakeholders over this value (for example, training, research, degraded area recovery, support for water monitoring proposals, among others) and some negative impacts such as sedimentation and water contamination from the discharge of fuel and wastewater.

The majority of stakeholders interested in this value indicate that their commitment to this value is high or very high. VITALIS, for example, even though its interest is very high, its ability to commit to this value is only medium due to a lack of resources and logistics necessary to implement the water monitoring plan proposal.

It is important to mention that stakeholder commitment measured current contribution capacity, not future or hoped capacity. In the case of water, nevertheless, some stakeholders indicated that despite their not being involved currently in activities associated with this value, their interest remains high, since they hope to develop projects in the near future.

The discussion surrounding the touristic zone value was much wider given that all stakeholders have related issues. Worksheet 3b shows the associated issues, as well as economic dependence, and the positive and negative impacts from stakeholders. In summary, the commitment of all stakeholders to this value is high to very high.



Salto Aponwao (Photo: I. Novo)

WORKSHEET 3a FOR TOOL 3. Summary of stakeholders' engagement with the value water.

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
Understanding Stakeholders	Main issues associated with this stakeholder	<p>Research about water.</p> <p>Training, technical assistance.</p> <p>Studies on sedimentation and cartography of the Aponwao Upper Watershed.</p> <p>Recovery of gallery forests' connectivity wetlands Capacity development</p>	Public water works.	<p>Energy source from all the communities (6 local energy producers).</p> <p>Conservation committees.</p> <p>Micro watershed's reforestation for water production.</p> <p>Direct water consumption from the Cuyuní-Chicanan River,</p> <p>Transportation routes.</p> <p>Fishing.</p>	Development of a Watershed Management Proposal.	Conservation committee. Water Monitoring Plan Proposal.	Water Monitoring Plan Proposal.		<p>Monitoring of non conformed uses.</p> <p>Monitoring of bio-physical and social parameters of the Caroní Watershed.</p> <p>Proposal of environmental studies to support management.</p> <p>Promote follow up of conservation programs.</p>	Currently we don't have any activity related to water. Nonetheless, it is included in the regulations for the Tourism Plan for SOPNC (water pollution due to touristic activity).	
	Economic dependency	NO	Yes, through Hidrobolívar.	Yes, directly and indirectly through food transportation, tourism and fisheries.	NO	NO	NO	NO	NO	NO	

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
Understanding Stakeholders	Potential negative impacts of stakeholders on site	No	Pollution of water bodies and disruption of water flow due to inappropriate development	<p>Depending on the projects:</p> <p>Discharge of fuel and wastewaters in water bodies.</p> <p>Sedimentation due to road construction.</p> <p>Periodical fires.</p> <p>Contamination and sedimentation in water bodies as a result of mining.</p>			No	No	<p>Impacts due to:</p> <p>Hydroelectric projects.</p> <p>Building of facilities, camping services for hydro-meteorological, limnological, etc. study networks.</p> <p>Development of conservation projects</p>	Does not apply	

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
Understanding Stakeholders	Negative impacts of site management on stakeholders	Deficiency to process permits which affects research.	Delays to process construction permits.	Lack and/or deficiency of law enforcement to avoid pollution. Area management lack of understanding on how indigenous communities traditionally use water. Lack of supervision.	Lack of supervision.	Does not apply.	Deficiency to process permits which causes delay of activities.	Deficiency to process permits which causes delay of activities.	Delays related to the process instrumentation to obtain permits. Expertise level. Follow up and active participation.	Lack of coordination to monitor the impact of tourism over water bodies in touristic sites.	

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
	Positive impacts of stakeholders on site	<p>Knowledge development</p> <p>Recovery of areas.</p> <p>Training.</p>	Looking for a solution to inhabitants' water needs.	<p>Communities Degraded areas recovery.</p> <p>Increase of trained staff for managing and recovery (through Conservation Committees)</p> <p>More attention to Water management issues through community organization and participation (i.e. Technical groups).</p>	<p>Increase of communities trainings (para-biologists)</p> <p>Increase of conservation areas.</p>	<p>Support for water monitoring plan proposal</p> <p>Training of INPARQUES staff and volunteers for resource conservation (green house keepers, firemen, professionals on the forestry field) 140 people have been trained for the last three years</p>	<p>Support for learning about and following up water quality, through a water monitoring plan. This plan will help to take the appropriate actions for conservation and management of water.</p>	<p>Significant support for conservation.</p> <p>Useful and high quality information base line.</p> <p>Vision and mission according to sustainable development goals.</p> <p>Training of staff and partners.</p>	<p>Community and tourism-related organization's training about water conservation.</p>	Communities' request of increasing training to recover other sectors of the park, in particular sector 4.	
Understanding Stakeholders	Positive impacts of site management on stakeholders	Support for research and training (through alliances and logistical support).	Support and facilitation of government activities within the park, through alliances.	Support of communities training for resources conservation and fire management (among others).	Support for research and training (through alliances and logistical support).	Support for research and training (through alliances and logistical support).	Joined proposal for Monitoring plan with INPARQUES.	Does not apply	Donations and support for institutional studies and research of interest for conservation and management.	Support of communities training for resources conservation	

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
	Capacity of stakeholders to engage with site management (VERY HIGH, HIGH, MEDIUM, LOW)	HIGH	HIGH	VERY HIGH	VERY HIGH	HIGH	MEDIUM	HIGH	VERY HIGH	HIGH	
	Organization of stakeholders (Very High, High, Medium, Low)	VERY HIGH	VERY HIGH	MEDIUM	VERY HIGH	HIGH	HIGH	MEDIUM	HIGH	HIGH	
Assessment of Stakeholder Engagement	What opportunities do stakeholders have to contribute to management?								To strengthen relationships over time to develop common tasks.		
	What is the level of engagement of the stakeholder?	HIGH	HIGH	VERY HIGH	VERY HIGH	HIGH	MEDIUM	HIGH	VERY HIGH	HIGH	

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
Summary	Describe the overall adequacy of stakeholder engagement	Engagement level of NEUG with water is high and focused mainly on research, skill development, gallery forests' connectivity recovery and the study of sedimentation and cartography of the Aponwao Upper Watershed.	Engagement level of the Bolivar State Government with water is high and relates to public water works.	Engagement level of indigenous communities with water is very high and linked to its use in multiple activities (see section 1 of this table).	Engagement level of TNC with water is linked to the development of a proposal for watersheds management.	Engagement level of INPARQUES is high and it is related to the water conservation committees and to the development of water monitoring program proposal.	Engagement level of VITALIS is medium and it is linked to their interest in implementing the water monitoring program in CNP.	Engagement level of Eco Diversity, Conservation and Development is high, although at the moment is not developing activities related to this value.	Because of increasing threats to the environment and in response to the country needs Edelca has a very high level of engagement and prioritization of resources' investment.	Even though CI Venezuela is not currently working on activities related to water, their engagement is high and it would be linked to the development of a watershed management proposal and the implementation of a water monitoring plan to measure the impact of tourism over water.	
Rating	Rate the overall adequacy of stakeholder engagement (Very High, High, Medium, Low)	HIGH	HIGH	VERY HIGH	VERY HIGH	HIGH	MEDIUM	HIGH	VERY HIGH	HIGH	

Rating: VERY HIGH (>80%), HIGH (80-50%), MEDIUM (49-30%), LOW (<30%)

WORKSHEET 3b FOR TOOL 3. Summary of stakeholders' commitment to the value touristic zones.

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities Sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS	
Understanding Stakeholders	Main issues associated with this stakeholder	Research										
		Proposal to create interpretive trails in different parts of Canaima NP and Sierra de Lema in collaboration with Tourism Department from Sifontes Municipality and CIEG-NEUG.	Public Works. Roads improvement. Setting up tourism stops.	Sector 5, Several hikes E'masensen II Cooperative (Luepa-Kavanayen-Karuay) Touristic services Troncal 10 (guidance, restaurants, transportation, handicrafts)	Development of a tourism plan proposal in eastern and western sectors of CNP Support for curriculum development for Agro tourism School in Canaima	Conservation Committee Proposal of a monitoring Plan for touristic zones in CNP (working with VITALIS)			Participation in the sustainable development tourism plan proposal in CNP	Monitoring of uses for tourism and recreation. Support and participation in the sustainable development tourism plan proposal in CNP		
		Training	Project for touristic signaling in eastern sector (Signaling Plan for the Bolivar State Government).	Participation in the sustainable development tourism plan proposal in CNP	Community ecotourism project in CNP (TNC, UNESCO, MINTUR; INPARQUES).	Participation in the sustainable development tourism plan proposal in CNP Signaling Plan for CNP.		Proposal of a monitoring Plan for touristic zones in CNP (working with INPARQUES)	Support two theses from Eastern University for the development of touristic products in Akanan Valley.	Support and training of tourism enterprises and cooperatives in Pemón through the Community Participation Program.	Participation in the sustainable development tourism plan proposal in CNP	
		Tourism career (Technical degree).	Improvement of airport terminals. Training for tour operators.	Preparation and training of tour guides.	Pemón environmental concepts teaching guide (FIEB, FLASA, FFEM)	Proposal of an Inter-institutional Cooperation Alliance for the development of tourism activities (Government of Edo. Bolivar, INPARQUES)		Participation in the sustainable development tourism plan proposal in CNP	Thesis on touristic segments in Akanan.	Support for infrastructure development for tourism.	Support for development of ecotourism products in Uroy Jaray	
		Specialization and Masters in Environmental Sciences.	Work with indigenous communities in conservation. Solid waste management in eastern sector.	Training of human resources to work with tourists. Infrastructure remodeling for tourism in sectors 2, 4 and 5.	Support for the development of tourism activity in Wonken and Uriman (FIEB, UNESCO, FFEM)	Agreement INPARQUES-MINTUR to invest in infrastructure in the western sector Training for managers, operators and indigenous communities (INPARQUES, MINTUR; UPEL, Eco DCD)		Support with materials and equipment for Signaling in CNP	Thesis on touristic marketing in Akanan Valley (Kuana, Kamarata, Kavak). Development of a touristic route in the community Parroquia Pedro Cova El Manteco (Fundacite Guayana).	Support for infrastructure development for tourism. Logistical support and air transportation for operations in Roraima Tepuy.	Support for community training in ecotourism (materials development, etc.)	
		Masters degree in Marketing.	Participation in the sustainable development tourism plan proposal in CNP	Creation of cooperatives. Training of technicians in agro ecotourism (Canaima Lake, Kumarakapay).						Conservation of sites of interest threatened by forest fires.		
		Protected Areas Course recognized on a Masters level.										
		Extension										
		Workshop about Ecological and Operational Bases of Ecotourism in Guayana.										
		Para-biologists course for the Pemón community.										
Awareness and conservation activities from CEEUNEG.												

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities Sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
	Economic dependency	NO	Yes, registration of tour operators.	Sector 4, NO Sector 2 and 5, YES	NO	Yes. Entrance at the western sector Concessions Authorizations.	NO	NO	NO	NO	

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities Sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
Understanding Stakeholders	Potential negative impacts of stakeholders on site	NO	<p>Visual impact on the landscape.</p> <p>Overload to the capacity of the oriental sector of the CNP.</p> <p>Contamination of water bodies and interruption of water flow, due to inappropriate construction work.</p>	<p>Generation of solid waste.</p> <p>Opening of ditches</p> <p>Vegetation fires</p> <p>Mineral and plants extraction</p> <p>Visual impact on the landscape.</p> <p>Direct impact on the landscape and its resources (fauna, flora)</p> <p>Loss of touristic value (attractive and cultural) of sites of touristic interest for breach of the regulations.</p> <p>Pollution by unloads of residual fuels and wastewaters to water bodies.</p> <p>Sedimentation of water bodies due to the construction of roads.</p> <p>Extraction of metallic and non-metallic minerals originates pollution and sedimentation of water bodies.</p>	NO	Allows the deterioration of the touristic zones	NO	Does not apply	<p>Impacts due to:</p> <p>Hydroelectric projects for generation and transmission</p> <p>Construction of facilities, camps, services, for networks of hydro-meteorological, limnological studies, etc.</p> <p>Development of conservation projects</p> <p>In addition:</p> <p>Possible deterioration of the landscape due to the constructions based on criteria that they believe are appropriate, due to the lack of good architecture in the park.</p>	NO	

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities Sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
Understanding Stakeholders	Negative impacts of site management on stakeholders	Does not apply	Delays in the permissions granted for adequacy of infrastructure	<p>Lack of application of the established procedure and/or insufficiency in the application of the procedures to avoid the deterioration of the touristic site.</p> <p>Lack of coordination, communication and planning for the attention of touristic activities.</p> <p>Decrease of the income for tourism decline due to the deterioration of the sites.</p>	Does not apply	Does not apply	Does not apply	Does not apply	Definition of procedures and terms of reference for infrastructure according to the CNP figure.	Does not apply	

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities Sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
	Positive impacts of stakeholders on site	<p>Generation of knowledge, for more than one decade, on the biodiversity of the Forests Lema and the Great Savannah, through the development of research projects from the Center of Ecological Research of Guyana (CIEG-NEUG).</p> <p>Creation of internal networks in NEUG where researchers from CIEG support the training of the Tourism teachers with a module on Biodiversity, Interpretation, and Ecotourism</p>	<p>Improvements of the park's infrastructure</p> <p>Marketing of CNP as a touristic destination</p> <p>Increase of people qualified in the rendering of tourist services</p> <p>Improvements in touristic services</p>	<p>Increase of people qualified in the rendering of tourist services</p> <p>Improvements of the infrastructure.</p> <p>Improvements in touristic services</p> <p>Improvements in resource management</p> <p>Increase of intercultural management of touristic activity</p> <p>Generation of added values to the touristic attractions.</p>	<p>Increase of communities training for the development of touristic activity.</p> <p>Planned and sustainable tourism</p>	<p>Increase of the number of people prepared to provide services to tourism.</p> <p>Development of a planned and sustainable tourism.</p> <p>Improvements in touristic services</p>	<p>Understanding about how tourism is developed in areas of touristic interest defined in the monitoring program.</p> <p>Improvements in park's signaling</p>	<p>Increase of communities training for planning and development of sustainable tourism in CNP and surrounding areas.</p>	<p>Increase of local capacity for those communities interested in developing tourism activities.</p> <p>Marketing of a planned and sustainable tourism</p>	<p>Part of a process for improvements in the quality of life of the communities (infrastructure, training).</p> <p>Sector 4. Follow-up the process of construction of a touristic stop in km 16.</p> <p>Unequal touristic activity in different sectors of the park. In sector 4 training is requested for offering touristic services.</p> <p>Studies for identification of touristic attractions in sector 4.</p>	

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities Sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
Understanding Stakeholders	Positive impacts of site management on stakeholders	Facilitates awareness and conservation activities at the CEEUNEG	Improvement of Bolivar State Government tourism management at the park, thanks to a Cooperation Agreement	Support for raising awareness and training of the communities on the managing, preservation and conservation of the resources Facilitation of implementation of activities by granting permits	Facilitates awareness and conservation activities in the area	Does not apply	Joint proposal with INPARQUES	Facilitation of implemented actions		Facilitation of training, awareness and conservation activities in SOPNC	To strength the development of indigenous communities initiatives for tourism in Troncal 10. To assess the touristic potential in CNP's buffer zone
	Capacity of stakeholders to engage with site management (VERY HIGH, HIGH, MEDIUM, LOW)	VERY HIGH	VERY HIGH	SECTOR 4, MEDIUM SECTOR 2, HIGH SECTOR 5, HIGH SECTOR 6, HIGH SECTOR 7, MEDIUM	VERY HIGH	HIGH	HIGH	VERY HIGH	VERY HIGH	VERY HIGH	The Federation assumes the valuation of the sectors 2, 6, and 7

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities Sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
	Organization of stakeholders (Very High, High, Medium, Low)	VERY HIGH	VERY HIGH	MEDIUM	VERY HIGH	HIGH	HIGH	MEDIUM	VERY HIGH	VERY HIGH	
Assessment of Stakeholder	What is the level of engagement of the stakeholder?	HIGH	VERY HIGH	SECTOR 4, MEDIUM SECTOR 2, HIGH SECTOR 5, HIGH SECTOR 6, HIGH SECTOR 7, MEDIUM	VERY HIGH	HIGH	HIGH	VERY HIGH	VERY HIGH	VERY HIGH	The Federation assumes the valuation of the sectors 2, 6, and 7

	Name of stakeholder	NEUG	BOLIVAR STATE GOVERNMENT	Indigenous Communities Sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	COMMENTS
Summary	Describe the overall adequacy of stakeholder engagement	The level of engagement of the NEUG with the Areas of Touristic Interest is high and it is principally directed towards research and training of the members of the NEUG's Traveling Center, and in the design and implementation of a training and updating program for eco-tour operators working at CNP and Sierra de Lema.	The level of engagement of the Government of Edo. Bolivar with the Areas of Touristic Interest is very high and it is principally focused on public works, road improvements, conditioning of touristic stops, and support for signposting at CNP	The level of engagement of indigenous communities with the Areas of Touristic Interest varies throughout different sectors. In sectors 4 and 7 it is Medium, and in sectors 2, 5, and 6 it is High. There are diverse matters associated with this activity. See section 1 of this table.	The level of engagement of TNC with the Areas of Touristic Interest is very high and it is principally focused to the development of a community ecotouristic project, and writing a tourism plan proposal for CNP	The level of engagement of INPARQUES is high, given the development of multiple activities (mentioned in section 1 of this table), limited by budget restrictions	The level of engagement of VITALIS is high, given that budget restrictions won't allow the implementation of proposed plans	The level of engagement of Eco Diversity, Conservation and Development is very high and it is focused on several activities highlighted in section 1 of this table		The level of engagement of CI Venezuela in SOPNC is very high and it is focused mainly on the promotion of the Tourism Plan, and to community training for development of ecotourism products, according to the regulations of the Tourism Plan	
Rating	Rate the overall adequacy of stakeholder engagement (Very High - High - Medium - Low)	HIGH	VERY HIGH	Sector 4, MEDIUM Sector 2, HIGH Sector 5, HIGH Sector 6, HIGH Sector 7, MEDIUM	VERY HIGH	HIGH	HIGH	VERY HIGH	VERY HIGH	VERY HIGH	

Rating: VERY HIGH (>80%), HIGH (80-50%), MEDIUM (49-30%), LOW (<30%)

WORKSHEET 3c FOR TOOL 3. Engagement of Stakeholders/Partners - Summary

	Stakeholders	NEUG	GOVERNMENT OF EDO. BOLÍVAR	Indigenous Communities sectors 4 & 5	TNC	INPARQUES	VITALIS	Ecodiversity, Conservation & Development	CVG-EDELCA	CI VENEZUELA	Overall Stakeholder Engagement for major values
Major Values	Water	HIGH	HIGH	MUY HIGH	MUY HIGH	HIGH	MEDIUM	HIGH	MUY HIGH	HIGH	(MEDIUM TO VERY HIGH)
	Touristic Zones	HIGH	VERY HIGH	Sector 4, MEDIUM Sector 2, HIGH Sector 5, HIGH Sector 6, HIGH Sector 7, MEDIUM	VERY HIGH	HIGH	HIGH	VERY HIGH	VERY HIGH	VERY HIGH	(MEDIUM TO VERY HIGH)
Overall Engagement of Stakeholder		HIGH	(HIGH TO VERY HIGH)	(MEDIUM TO VERY HIGH)	VERY HIGH	HIGH	(MEDIUM TO HIGH)	(HIGH TO VERY HIGH)	VERY HIGH	(HIGH TO VERY HIGH)	

WORKSHEET 3d FOR TOOL 3. Engagement of INPARQUES of the following Values: Tepuyan Formations, Savannah-forest Ecotone, Morichales, Gallery Forest, Bushes on Rocks, Grasses and Bushes on Turbas, Threatened Species and Degraded Habitats.

	Factor	INPARQUES/MINISTRY OF THE ENVIRONMENT VALUE OR GROUP OF VALUES (PCO): A	COMMENTS
Understanding Stakeholder	Main issues associated with this stakeholder	Management of the value	
	Positive impacts of stakeholders on value	Conserve, manage, administrate	
	Negative impacts of stakeholders on value. Please explain	Yes	There is no a Land Use Plan and Regulations for the western sector of CNP
	Three positive impacts of INPARQUES (related to the value) on stakeholders	Open to coordinate with other stakeholders	Creation of strategic alliances, agreements UNEG-INPARQUES-FUNDACITE Agreement INPARQUES-KUMARAKAPAI for recreational area.
	Three negative impacts of INPARQUES (related to the value) on stakeholders	Does not apply	
	Economic Dependency (related to the value): (Very High, High, Medium, Low)	Low	Own income from legal instruments, concessions, films.
	Willingness/capacity of stakeholders to engage with value management (Very High, High, Medium, Low)	High	Even though the willingness is very high, available resources, park extension, accessibility, etc. makes it difficult to involve a higher number of people to work in the site.
	Willingness/capacity of INPARQUES (related to the value) to engage with stakeholders (Very High, High, Medium, Low)	Low	Same comments. Willingness is very high, but capacity is low because of aforementioned reasons.

	Factor	INPARQUES/MINISTRY OF THE ENVIRONMENT VALUE OR GROUP OF VALUES (PCO): A	COMMENTS
	Political/Social specific influence to the value or group of values. (Very High, High, Medium, Low)		
	Organization for use/management of the value or group of values. (Very High, High, Medium, Low)	Low	
Assessment of Stakeholder Engagement/Contribution	What opportunities do stakeholders have to contribute to management?	High	
	What is the level of contribution and engagement of the stakeholder? (Very High, High, Medium, Low)	High	
Summary	Describe the overall stakeholder engagement	High disposition or interest, but medium or low response	
Rating	Rate the overall stakeholder engagement (Very High, High, Medium, Low)	Medium	

Very high: >80% of the engagement has positive aspects; High: 60-79% is positive; Medium: 50% is positive; Low: 1-49% is positive

TOOL 4. REVIEW OF NATIONAL CONTEXT

The review of the national context reveals how national policies, legislation, and actions affect the World Heritage Site.

This part of the evaluation involves reviewing strengths and weaknesses of five criteria, offering comments on past actions and making recommendations for future actions.


The Worksheet for Tool 4 summarizes this review.

WORKSHEET FOR TOOL 4. Review of National Context.

Indicators	Strengths	Weaknesses	Recommendations/Comments
<p>World Heritage Site and protected area legislation</p>	<p><i>The Constitution of the Bolivian Republic of Venezuela</i> (1999) contains various articles related directly or indirectly to the conservation of natural resources and protected areas. Article 127 for example establishes that the State will protect the environment, biological and genetic diversity, ecological processes, national parks and natural monuments and other areas of ecological importance.</p> <p><i>The Environment Act</i> (2006) mandated a new legal framework for the environment, replacing the previous rendition from 1976. It establishes overarching principles for environmental management in a sustainable development context. It has updated and modernized management for the park.</p> <p>Article 67 created an environmental information registry which includes information about areas under special management (including national parks) as well as habitat and indigenous lands.</p> <p><i>The Land Use Act</i> (1983) was designed to balance how land was used, established a land use planning process in order that populations and activities take place equitably on public lands, considering the strengths, potential, and physical limitations of each region. This law created</p>	<p>From 2005 to 2007 there has been a legal insecurity with regard to land use management given that the National Assembly approved the Planning and Land Use Management Act (2 September 2005), although it had not taken effect for more than a year; thereafter the Assembly rescinded the law before it could ever take effect. In its absence the Land Use Planning Act of 1983 continues alongside the expectation of a reform (in particular concerning the management for special management areas).</p> <p>There are no laws specifically designed to manage national parks, and the current legal frameworks needs to be updated.</p> <p>Neither the park establishment decree nor the later decree to increase the park includes any objectives for this area.</p> <p>There is no management plan for the park.</p> <p>The Land Use Plan and Regulations establish objectives for the Eastern Sector of the park. Nevertheless, there is no legal document that</p>	<p>It is vital that formal environmental conservation norms actually be put into practice. It is also indispensable that proposals and changes to laws are carried out in a participatory fashion and include opinions of different organizations, but public and private.</p> <p>In 2006 a bill emerged (from the Ministry of Environment) for a Forests Law that would overrule the current Forestry Law for Soils and Water. In the case of national parks, this bill would create a legal hole because it contains no rules for national parks, their characteristics, declaration, objectives, etc. as does the Forestry Law of 1966.</p> <p>Even though Decree No. 276 (about administration, national parks, and natural monuments) exists, it is not a legal instrument to guarantee stability of protected areas.</p> <p>On the other hand, in this same bill Article 58 says, "The sustainable use of forests in national parks with management plans, is based in uses oriented toward preservation, education, science, recreation, and ecotourism as established by the Land Use Plan and Regulations."</p> <p>This bill continues under discussion.</p> <p>Similarly since 2006 there exists another bill</p>


Indicators	Strengths	Weaknesses	Recommendations/Comments
	<p>the Protected Area System (ABRAE) that includes among others, the national parks.</p> <p>Forestry, Soils, and Water Act (1966). This legislation created the categories of ABRAE for the conservation of forests, soils, and water, such as national parks. It emphasizes the obligation of the State to protect watersheds and manage forest fires, which is one of the most important threats to the park.</p> <p>Biological Diversity Act (2000) is the principal legal means to regular the conservation of biological resources in the country. It is connected to the Convention on Biological Diversity of which Venezuela is a signatory.</p> <p>The Decree to Establish CNP (1962) defined the park's boundaries that were then expanded in 1975 to include 3,000,000 ha, including the region of the Venezuelan Guayana under the jurisdiction of Piar and Roscio (in the state of Bolivar) Districts.</p> <p>CNP is divided administratively in two sectors: East and West.</p> <p>The Land Use Plan and Regulations for the Eastern Sector of CNP (1991) establishes the policies for assigning land uses, zoning, and regulations for new uses by both the public and private sectors.</p> <p>In the Western Sector of the park, there is no such plan, but there does exist a Partial</p>	<p>specifies objectives for the entire national park.</p> <p>The same plan for the Eastern Sector is also outdated.</p> <p>There is corresponding plan for the Western Sector of the park.</p> <p>Indigenous lands within the park have not been demarcated.</p>	<p>known as the Natural Protected Areas Act that would establish policies for protection and conservation as well as for the sustainable use of natural resources inside these areas.</p> <p>There are no line items in the national budget or state support for CNP despite its recognition as a World Heritage Site.</p> <p>Developing a management plan should have priority or at the very least begin to work on an operational plan for the area.</p> <p>The Land Use Plan and Regulations for the Eastern Sector should be updated.</p> <p>The Land Use Plan and Regulations for the Western Sector could be written as soon as possible.</p> <p>The Enhancing Our Heritage Project in Canaima carried out a workshop designed to initiate a process to develop a Land Use Plan and Regulations for the entire park. This effort was not successful since indigenous communities thought that delimiting their lands should be done first.</p> <p>There are proposals to zone this sector of the park that should be incorporated into the development of the Land Use Plan and Regulations for CNP.</p> <p>There is also a proposal to create a master plan for the Caroní River watershed that would also be an important input for the Land Use and Regulation Plan.</p>

Indicators	Strengths	Weaknesses	Recommendations/Comments
	<p>Regulation under the Land Use for the Management of National Parks, Decree 276 (9 June 1989) that serves as the basis for managing CNP, especially the Western Sector of the park.</p> <p>There are two proposed site plans that are used to manage land uses: one for Canaima Lagoon, Orchid Island, and Angel Falls and the other for Paraitepuy de Roraima and its buffer zones. INPARQUES is currently reviewing both plans.</p> <p>Decree to Establish the National Commission for Demarcating Habitat and Indigenous Community Lands (2001) created this institution that grants collective ownership rights to ancestrally occupied indigenous lands.</p> <p>Demarcation of Habitat and Indigenous Lands Act (2001) manages the national plan for demarcating and guaranteeing habitat and ancestrally and traditionally occupied indigenous lands. The law establishes that this activity will be executed with direct participation of indigenous communities, considering the ecological, geographical, topographical, populational, social, cultural, religious, political, and historical factors. It also considers lands already in the protected area system.</p> <p>Indigenous Communities Act (2005). For the first time there is a law about</p>		<p>Relevant authorities and indigenous communities should accelerate the process of delimiting indigenous lands in order to obtain collective title to the lands.</p>

Indicators	Strengths	Weaknesses	Recommendations/Comments
	<p>indigenous matters. The full title refers to the Habitat and Lands of Indigenous Communities, Environment and Natural Resources. Article 48 states that indigenous communities have the right to live in a healthy, safe, and ecologically balanced environment and will assist in environmental protection of natural resources, especially national parks, forest reserves, natural monuments, biosphere reserves, water reserves and other ecologically important areas. In no case will activities that irreversibly damage the environment, especially these protected areas be permitted. The law creates a National Institute for Indigenous Peoples that among its functions promotes the co-management between the state and indigenous peoples of natural resources, national parks, protected areas, as well as sustainable development in indigenous lands.</p> <p>Water Act (2007) aims to establish policies for water management. Article 53 calls for the creation of special water management areas, such as national parks and other legal instruments.</p>		 <p><i>Photo: I. Novo</i></p>

Indicators	Strengths	Weaknesses	Recommendations/Comments
<p>Conservation within broader government policy</p>	<p>Tourism Act (2005) promotes and regulates tourism in a sustainable development context. It calls on the Ministry of Tourism to coordinate with the Ministry of the Environment in the development of studies and projects to create management and use plans for protected areas.</p> <p>The Ministry of Tourism has established as a priority the creation of the Plan for Tourism Development in CNP, as outlined in the State Tourism Plan (2005).</p> <p>Thanks to Article 33 of the Tourism Act (2001), the Ministry of Tourism has the authority to create a national tourism plan which must be consistent with all policies related to planning and socioeconomic development in the country as well as that which is established in the National Land Use Plan.</p> <p>The National Tourism Plan for 2003-2007 zones touristic locations and infrastructure.</p> <p>The same plan for the years 2007-2012 establishes seven tourism zones and Canaima is part of Tourism Zone 3, called "Orinoquia". The Plan is based on principles of the Montreal Declaration of Tourism, established by the International Office for Social Tourism (1996).</p> <p>INPARQUES, together with indigenous communities and other governmental and non-governmental organizations, began in</p>	<p>Various state entities have interests and jurisdictions within CNP; unfortunately they do not coordinate well.</p> <p>This is especially so with regard to tourism where coordination needs to be strengthened.</p> <div data-bbox="997 764 1423 1073" data-label="Image"> </div> <p><i>Photo I. Novo</i></p>	<p>Coordination between different governmental agencies in CNP needs strengthening.</p> <p>The National Tourism Plan should be disseminated and whose implementation should be promoted as well as approve the National Tourism Sustainable Development Plan for the Eastern Sector of CNP.</p>

Indicators	Strengths	Weaknesses	Recommendations/Comments
	<p>2006 the formulation of the Sustainable Development Plan for the Eastern Sector of CNP. This plan proposes to improve the quality of life for the inhabitants of this sector, conserving biological and cultural diversity as world heritage.</p> <p>The Ministry of Indigenous Peoples was created in G.O. 5,836 (8 January 2007) with Decree No. 5,103 concerning the Organization and Operation of the National Government.</p> <p>The plan for the sustainable development of the Western Sector of PNC along the Kanaimô-Kamarata-Kavac-Isla Ratón Axis (2006) is being coordinated by the Ministry of Tourism along with indigenous populations and other public entities including the Ministry of the Environment, INPARQUES, Ministries of Housing and Habitat, Health, Education and Cultura, and the National Office for Cooperatives. This plan is based on high regard for the indigenous cosmovision and its cultural, social, political, economic, and spiritual manifestations. Its main objective is to consolidate tourism in CNP by developing participatory development and co-management processes within the indigenous population that lead to ecological and touristic sustainability.</p>		
International conservation conventions	The State has signed and ratified various international conventions related to biodiversity conservation. Among them include:	Treaties and laws have not been given due attention by the government.	The government should follow up on the implementation of international agreements.

Indicators	Strengths	Weaknesses	Recommendations/Comments
and treaties	<p>National and World Heritage Convention</p> <p>Convention on the Protection of Flora, Fauna, and Scenic Beauty of America</p> <p>Convention on the International Trade in Endangered Species (CITES)</p> <p>Convention on Biological Diversity</p> <p>The Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar)</p>	<p>Interviewed INPARQUES staff indicates that there are available financial resources for the implementation of international conventions.</p> <p>Although CNP has no Ramsar declared wetlands, several do have the necessary characteristics for possible nomination.</p>	 <p><i>Photo I. Novo</i></p>
Government support for the World Heritage site	<p>Given that CNP enjoys recognition as a World Heritage Site, various national and international organizations can support the site's management.</p>	<p>There is little governmental support for CNP as a World Heritage Site that would increase its resources. Only 0.85% of the national budget is assigned to the environmental sector. In recent years the budget for conservation has decreased.</p>	<p>Environmental policies and incentives should be defined to allow budgetary increases in public and private entities and international organizations in the environmental sector.</p>
National Protected Area Agency and the World Heritage site	<p>INPARQUES, an agency of the Ministry of Environment and Natural Resources (MARN), is responsible for planning, management, development, administration, protection, and regulation of the national parks and natural monuments in Venezuela. The organizational structure of the system</p>	<p>There are both budgetary and personnel limitations for CNP's management. Also there is a quick rotation of administrative staff that affects the park's management.</p> <p>At the beginning of 2007, the government decided not to continue</p>	<p>The government should consider CNP's only capacity for earned income as well as increase the percentage assigned to the management of the park. This would meet the requirements of Article 21 of the Land Use and Regulation Plan with respect to services in the park that should be channeled into the execution of programs in the Land</p>

Indicators	Strengths	Weaknesses	Recommendations/Comments
	<p>consists of three management levels: Central, Regional, and National Park Management levels.</p> <p>Additionally the master plan for the Caroní River watershed will strengthen the management of CNP.</p> <p>On the other hand, strategic alliances between INPARQUES and environmental NGOs such as VITALIS, TNC, Conservation International, PROVITA, and with national universities should strengthen park management.</p>	<p>with the GEF Project in Canaima: “Expanding Alliances with the National Park Service,” an initiative that had been progressing in this park with the support of INPARQUES, the Ministry of Environment, CVG-Edelca, Indigenous Federation of Bolivar State. The project aimed to develop and implement a new integrated management model for CNP and its adjacent areas, characterized fundamentally by a co-management scheme for the park between INPARQUES, CVG-Edelca, and indigenous communities.</p> <p>Currently there are no examples of co-management in the park.</p>	<p>Use and Regulation Plan for the Eastern Sector of CNP.</p>

SECTION 3. PLANNING

TOOL 5. ASSESSMENT OF MANAGEMENT PLANNING.

CNP currently does not have a management plan or work plan. Nevertheless, the Enhancing Our Heritage Project has helped make people aware of the importance of this tool for park management.

WORKSHEET FOR TOOL 5. Adequacy of Primary Planning Document.

Plan name	Level of Plan approval (1, 2, 3, 4)*	Year of preparation	Year specified for next plan review	Comments (comments should concentrate on adequacy, currency, and integration of plan with other planning instruments)
Management plan	4			Currently there is no management plan, but hopefully at the end of November a meeting will take place to plan its development.
Land Use and Regulation Plan for the Eastern Sector	1	1991		It should be reviewed and updated every five years
Land Use and Regulation Plan (Western Sector)	4			It should be developed and include both park sectors
Proposal for site plans for Canaima Lagoon and its tourism corridor	3	2004		It has been delivered to the indigenous leaders to begin its review. A copy has also been given to the municipality as a “work tool”
Proposal for site plans for Paraitepuy de Roraima and its touristic corridor	3	2004		It has been delivered to the indigenous leaders to begin its review. A copy has also been given to the municipality as a “work tool”
Proposal for a sustainable tourism development plan in the Eastern Sector of CNP.	2	2005	2008	The action plan part of this proposal is being reviewed by the Technical Committee (Indigenous Federation of Bolivar, INPARQUES, the Government of Bolivar, CI, and CVG-Edelca) to approve and implement it.
Proposal for a signage plan in CNP	2	2005		INPARQUES should implement it with the support of the Ministry of Tourism which is also interested in financing its implementation.
Proposal for the Water Monitoring Plan in CNP	3	2006	2007	Researchers and actors are currently reviewing the plan and hopefully INPARQUES will implement it.
Proposal for the plan to manage tourism zones (ZITR)	3	2006	2007	Specialists and actors are reviewing the plan and hopefully INPARQUES will implement it.

* - **Key:** 1. Approved, 2. Reviewed and approved, 3. Plan is a draft and it is not in process of approval, 4. Does not exist

TOOL 6. DESIGN AND MANAGEMENT ASSESSMENT

CNP has no management plan that would strategically define how space is used in the park and assist in the management and conservation of resources in the protected area. It should contain at least the following aspects.

- Management objectives and policies: how to manage, define and assign uses, activities permitted.
- Programs for the sustainable management of resources and economic activities compatible with conservation.
- It should developed participatorily, an aspect that guarantees its social sustainability and technical viability.

In order to analyze site design, Tool 6 was used. It identifies strengths and weaknesses across five variables (key habitats, size, external relations, legal status and land tenancy, access points, connectivity and surrounding areas).

The analysis was global and not by site values.

WORKSHEET FOR TOOL 6. Assessment of the CNP Design and Management

DESIGN ASPECTS		STRENGTHS	WEAKNESSES	Comments and management action to be taken if required
ECOLOGICAL INTEGRITY	Key habitats	The great majority of the park is covered by natural ecosystems, the majority of which are represented by the OFM. The Tepuyan Formations are unique and key habitats inside the park.	The morichales, gallery forest, and savannah-forest ecotones are among the most threatened ecosystems, followed by herbs and bushes on turbas and Tepuyan Formations.	
	Size	<p>The park covers 3,000,000 ha, sufficient size to maintain viable populations of key species. Park shape is particularly regular without zones having significant border effects, except in the north where the limits are straight lines that do not follow rivers or geographical accidents, ideal conditions for establishing limits in protected areas.</p> <p>The park is divided into two sectors: Eastern (known as the Great Savannah) and Western (known as Canaima, where Churún-Merú, better known as Angel Falls, can be found).</p>	Park patrol and control is very limited given the large size of CNP and its difficult access, especially in the Eastern Sector.	<p>Currently there is a good connectivity between the two sectors.</p> <p>According to CMAP reports (2007) park area measured by GIS is 2,886,695 ha, less than the official decree of 3,000,000 ha.</p>
	External Interactions	A great portion of surrounding areas is still natural. Some of them are protected which guarantees conservation in the short and medium term (see connectivity and surrounding areas in design aspects: management factors).		It is important to strengthen security to avoid that mining become a grave problem for the park.

DESIGN ASPECTS		STRENGTHS	WEAKNESSES	Comments and management action to be taken if required
MANAGEMENT FACTORS	Legal status and tenure	The government is responsible for land tenancy issues, such as recognizing collective ownership of indigenous peoples.		The government has to be sincere with the Pemon people and their land titling situation.
	Access points	<p>In the Eastern Sector of the national park, there are two terrestrial land access routes by way of Troncal 10 that cross the park north to south.</p> <p>In the Western Sector, access is only by air or water.</p> <p>In general, the low access to the park is a strength because it reduces human threats.</p>	The low access is also a weakness because it hinders monitoring in the zone.	

DESIGN ASPECTS		STRENGTHS	WEAKNESSES	Comments and management action to be taken if required
	Connectivity and surrounding areas	<p>There is connectivity between the different park ecosystems and surrounding areas, which are under different protection regimes such as forest reserves, forest lot, protected zones, national water reserves and natural monuments.</p> <p>The Imataca Forest Reserve is in the north of the park, La Paragua Forest Reserve is in the northwest, to the west and south is the Southern Protected Zone in Bolivar State and the South, Ikabaru Water Reserve</p> <p>On the other hand, there is the Caroni River Watershed management plan, the proposal to recategorize some protected areas. Among them, INPARQUES is developing a proposal to create Parawa'ta National Park in the south of Bolivar which would cover 2,651,511 ha. If approved, this would become the third largest park in the country after Parima-Tapirapeco and Canaima.</p>	Each of these protected area categories is managed by different institutions, which generates management problems because of overlapping functions, contradictions, and incompatibility among objectives in these protected areas.	<p>The government should promote institutional coordination to improve management efficiency and co-management in the park.</p> <p>It should review and consider proposals from the Caroní River Watershed Management Plan, which would help long-term conservation of the park.</p> <p>Security measures need to be strengthened with the hope of avoiding that mining become a grave problem for the park.</p>

SECTION 4. INPUTS AND PROCESS

TOOL 7. ASSESSMENT OF MANAGEMENT NEEDS AND INPUTS

The **input** assessment considers the resources (financial, human, equipment and infrastructure) required for effective management of the site, and measures these against resources available.

INPARQUES has equipment and infrastructure in the area; nevertheless, it should carry out a real evaluation of resources needed to manage the park.

Several Worksheets can help in this evaluation such as 7a for personnel needed, 7b existing personnel in the park in August 2007, 7c and 7d are about personnel who have come and gone in the Bolivar Regional Office, and 7e which covers some financial indicators in the park (2004 - 2007).

As Worksheet 7a indicates the Bolivar Regional Office currently has 26 employees which represent 58% of personnel required for this area according to INPARQUES estimates (45 employees according to a personal communication with the Office) and 42% of staff necessary according to a more detailed analysis carried out by Gonzalez (2005) where it is estimated that 62 people are necessary for park management.

According to INPARQUES and reported in Worksheet 7e, operating costs for the park for 2007 are Bs. 8,930,000 (US\$4,153.49) of which Bs. 3,000,000 (US\$1,395.34) of which 33% have been delivered to the institute through August 2007.

Given that there is insufficient information for 2007, the financial analysis was based on data from 2004-06. In 2004 the park had a budget of Bs. 154,866,183 (US\$72,030) of which only Bs. 68,368,923 (US\$31,799.50) related to operational costs and investment. In 2005, expenses increased, but tended to drop during 2006-07.

Annual budgets are not determined based on projects or activities and therefore do not have line items that refer to them, except in the case of the Project for Pemon Lifestyles in 2005.

There are also non-monetary contributions such as food for INPARQUES staff, fuel, lubricants and vehicle maintenance, as well as logistical support for communications (telephone) via CVG-Edelca, with which it would be very difficult to function as a national park. Also the Great Savannah Municipality collects solid waste in the Eastern Sector of the park. The contribution of these institutions has not been quantified.

The park does have some earned income principally through entrance fees in the Western Sector and tourist concessions. Nevertheless, these revenues do not directly

enter the park. Rather 80% are distributed to the Kanaimó community (without any kind of accountability) and 20% to the National Park System, as indicated in Worksheet 7e.

These amounts allow us to infer that CNP has the capacity to generate its own revenues that could cover “current quantifiable expenses,” if all such funds were to return to the park. The general trend from 2005-07 is an increase in revenues from both entrance fees and concessions.

According to the results from the second management effectiveness evaluation carried out in CNP, in the economic sector, between 25-50% of the stakeholders receive some kind of direct benefit from the park and between 25-50% of these recognize the goods and services of this protected area. The park has funds to cover 25% of the needed investments and has identified 25% goods and services.

The same evaluation indicates that there are no long-term financial plans. There are only some financial actions but the revenues from them are insufficient for park management.

WORKSHEET 7a FOR TOOL 7. Assessment of Management Needs and Inputs for Staff

Staff Category	Location	Necessary staff required by INPARQUES*	Current staff	Trained staff (Feb 2005 – Jun 2007)	Training needed	Training Level				Comments related to training
						D	A	G	VG	
Park Rangers	7 in eastern sector and 4 in western sector		11 (one on sick leave)	Yes, some	Identified by Human Resources, but information is not available			X		
Environmental Education Coordinators	0		0	0						
Secretary	C. Bolívar		2	Yes	Computer program management		X			
Sector Chiefs	2 eastern 1 western		3	Yes				X		
Administrative Assistant	C. Bolívar		1	No	Sales tax (IVA) updates and regulations		X			
Office Assistant	C. Bolívar		2	No		X				
Ticket salesmen	Western		2	No			X			
Technical Advisor	Western		1	Yes			X			
Community Environmental Extentionist	Pto. Ordaz		1	No						Not evaluated. Recently incorporated
Planners (in charge of environmental coordination)	Pto. Ordaz y C. Bolívar		2	Yes			X			
Regional Director	Pto. Ordaz	1	1	Yes				X		
Volunteers INPARQUES			**					X		
Volunteer Forest Fire Fighters (EDELCA)			**					X		

Very Good (VG) –All staff are trained to an adequate level to carry out required activities

Good (G) - More than 50 per cent of staff are trained to an adequate level to carry out the activities required

Adequate (A) - Between 40 and 50 per cent staff are trained to an adequate level to carry out the activities required

Deficient (D) –Most staff are not trained to an adequate level to carry out the activities required

* According to Regional Agency of INPARQUES (over a total of 45 people) o Gonzalez (2005), over a total of 62 people

** It was not possible to quantify the staff.

WORKSHEET 7b FOR TOOL 7. Staff. – August 2007.

Western Sector		Eastern Sector	
Name	Position	Name	Position
Olmania Báez	Sector chief	Elías León	Sector chief
Carlos Ulises Márquez	Advisor	José Gregorio León	Assistant sector chief
Bienvenido Pinzón	Park guard	Mauricio William	Park guard
Néstor Simón	Park guard	Esteban Olivero	Park guard
Franklin Quintero	Park guard	Otilio Ayuso	Park guard
José Manuel Sierra	Park guard	Martiniano Aguirre	Park guard
Luis Alberto Ruiz	Ticket vendor	Bernardo Peña	Park guard
José Calcaño	Ticket vendor	John Maikel John	Park guard
		Juan Freddy Delgado	Park guard

WORKSHEET 7c FOR TOOL 7. Staff who left Bolivar Regional Office (February 2005 to June 2007)

Name	Background	Position	Date Left	Contractor or Permanent
Elio Manríquez		Park guard		
Adelaida Vegas	Economist	Advisor		Contractor (3 months)
Ivonne Caraballo		Advisor	2006	Contractor (3 months)
Moraima Betancourt	Forester	Planner	July 2007	Contractor

WORKSHEET 7d FOR TOOL 7. Hired Staff, Bolivar Regional Office (February 2005 to June 2007)

Name	Background	Position	Date Hired	Contractor or Permanent
Olmania Baez	Forester	Chief of Western Sector	May 2005	Permanent
Carlos Ulises Márquez	TSU environmental evaluation	Technical advisor	February	Contractor
Franklin Quintero		Park guard	January	Permanent
Laura Calzadilla		Environmental communicator	June 2007	Contractor

WORKSHEET 7e FOR TOOL 7. Financial Indicators (July 2005 to August 2007)

Indicators	Budget received 2004	Budget received 2005	Budget received 2006	Budget received until August 2007
EXPENSES				
Staff	Bs. 86,497,260 (US\$40,231.28)	No official information	No official information	No official information
Operation	Bs. 8,368,923 (US\$3,892.52)	Bs.5.879.775 (US\$ 2.734,78) Bs.177,019,900 (US\$82,334.84) By the Pemon Lifestyle Project (GEF Canaima).	Bs. 9,520,000 (US\$4,427.90)	Bs. 8,930,000 (US\$4,153.49) assigned, Bs. 3,000,000 (US\$1,395.34) delivered until August
Investment (infrastructure repair and investment)	Bs. 60,000,000 (US\$27,906.98)		Bs. 47,170,518 (US\$21,939.78) assigned, Bs. 46,073,319 (US\$21,429.45) used and the rest returned	
Carnaval patrol		Bs. 800,000 (US\$372.09)	Bs. 788,736 (US\$366.85)	Bs. 946,500 (US\$440.23)
Semana Santa patrol		Bs. 625,000 (US\$290.70)	Bs. 1,172,964 (US\$545.56)	Bs. 1,333,420 (US\$620.19)
Fire Program			Bs. 18,496,000 (US\$8,602.80)	Bs. 14,288,000 (US\$6,645.59)
Total expenses without staff payments	Bs. 68,368,923 (US\$31,799.50)	Bs. 184,324,675 (US\$85,732.41)	Bs. 76,051,019 (US\$35,372.6)	Bs.19,567,920 (US\$9,101.35)
Income				
Earned income: Ticket sales (a)**	Bs. 40,800,000 (US\$18,976.74)	Bs. 67,206,280 (US\$ 31,258.73)	Bs. 58,387,660 (US\$ 27,157.05)	
Tourism concessions (only Western Sector)**	Bs. 39,278,000 (US\$ 18,268.84)	Bs. 71,551,800 (US\$ 33,279.91)	Bs. 97,929,200 (US\$ 45,548.47)	Bs. 19,567,920 (US\$ 22,099.14) until 18 June 2007
Total income**	Bs. 80,078,000 (US\$, 37,245.58)	Bs. 138,758,080 (US\$, 64,538.64)	Bs. 156,316,860 (US\$, 72,705.52)	

(a) **Earned income:** Only the Eastern Sector has entrance fees and tourism concessions. Besides there is income for filming and photography that were not considered in this calculation due to a lack of information. Amounts calculated according to the exchange rate in August 2007 (US\$1 = Bs. 2,150)

** These revenues equate to 20% of all that generated by ticket sales and concessions that entered INPARQUES.

SECTION 5. MANAGEMENT PROCESSES.

TOOL 8. RESULTS FOR THE SECOND MANAGEMENT EFFICIENCY EVALUATION (PROCESSES)

In order to evaluate management processes, criteria and desired standards needed to be defined according to the site's particular situation. The management processes have not changed drastically since the first-year report, given that, as mentioned previously, the park does not have a management plan. Nevertheless, Worksheet 8a reflects data obtained from park stakeholders, whose summary is presented in Table 8b. Also the results from the second management efficiency evaluation workshop in Worksheet 8c identified and evaluated some management processes.

WORKSHEET 8a FOR TOOL 8. Assessment of Management Processes.

Issue	Criteria	Rating	Explanation/ Comments	Next Steps
Management Structures and Systems				
1. World Heritage values Have values been identified and are these linked to management objectives?	The World Heritage Site has agreed and documented values and the management objectives fully reflect them.	Very Good		
	The World Heritage Site has agreed and documented values, but these are only partially reflected in the management objectives.	Good		
	The World Heritage Site has agreed and documented values, but these are not reflected in the management objectives.	Fair		
	No values have been agreed for the World Heritage Site.	Poor		
2. Management Planning Is there a plan and is it being implemented?	An approved management plan exists and is being fully implemented.	Very Good	Includes details on the type of planning instrument being used (for example, 10-year management plan)	
	An approved management plan exists but it is only being partially implemented because of funding constraints or other problems (please state).	Good		
	A plan is being prepared or has been prepared but is not being implemented.	Fair		
	There is no plan for managing the World Heritage Site.	Poor		
3. Planning Systems Are the planning systems appropriate i.e. participation, consultation, review and updating?	Planning and decision making processes are excellent.	Very Good	Considers opportunities for adjacent landowners and stakeholders to influence management planning. There are work plan details and the process to review and update the management plan.	
	There are some planning and decision making processes in place but they could be better, either in terms of improved processes or actions completed.	Good		
	There are some planning and decision making processes in place but they are either inadequate or they are not carried out.	Fair		
	Planning and decision making processes are deficient in most aspects.	Poor		

Issue	Criteria	Rating	Explanation/ Comments	Next Steps
4. Regular work plans Are there annual work plans or other planning tools?	Regular work plans exist, actions are monitored against planned targets and most or all prescribed activities are completed.	Very Good	Includes details of the type of planning instrument being used (for example, annual work plan, tourism plan). Based on the need to demonstrate management, annual operating plans are used. Beginning in 2008, planning will be based on programs.	
	Regular work plans exist and actions are monitored against planned targets, but many activities are not completed.	Good		
	Regular work plans exist but activities are not monitored against the plan's targets.	Fair		
	No regular work plans exist.	Poor		
5. Monitoring and evaluation Are management activities monitored against performance?	A good monitoring and evaluation system exists, is well implemented and used for adaptive management.	Very Good	Fires are being monitored Impacts of activities in Roraima are being monitored.	
	There is an agreed and implemented monitoring and evaluation system of management activities but results are not systematically used for management	Good		
	There is some ad hoc monitoring and evaluation of management activities, but no overall strategy and/or no regular collection of results.	Fair		
	There is no monitoring and evaluation of management activities in the World Heritage Site.	Poor		
6. Reporting Are all the reporting requirements of the World Heritage Site fulfilled?	Site managers can fully comply with all reporting needs and have all the necessary information for full and informative reporting.	Very Good		
	Site managers can fully comply with all reporting needs but do not have all the necessary information for full and informative reporting.	Good		
	There is some reporting, but all reporting needs are not fulfilled and managers do not have all the necessary information on the site to allow full and informative reporting.	Fair		
	There is no reporting on the World Heritage Site.	Poor		

Issue	Criteria	Rating	Explanation/ Comments	Next Steps
7. Maintenance of equipment Is equipment adequately maintained?	Equipment and facilities are well maintained and an equipment maintenance plan is being implemented.	Very Good		
	There is basic maintenance of equipment and facilities. If a maintenance plan exists it is not fully implemented.	Good		
	There is some ad hoc maintenance but a maintenance plan does not exist or is not implemented.	Fair		
	There is little or no maintenance of equipment and facilities, and no maintenance plan.	Poor		
8. Management infrastructure Is management infrastructure (e.g. fire trails and fire towers) adequate for the needs of the site?	Management infrastructure is excellent and appropriate for managing the site.	Very Good	Installations could be used as staff housing, offices, guard posts, etc.	
	Management infrastructure is adequate and generally appropriate for the site.	Good		
	Management infrastructure is often inadequate and/or inappropriate for the site.	Fair		
	Management infrastructure is inadequate and/or inappropriate for the site.	Poor		
9. Staff facilities Are the available facilities suitable for the management requirements of the site?	Staff facilities at the World Heritage Site are good and aid the achievement of the objectives of the site.	Very Good	Installations could be used as staff housing, offices, guard posts, etc.	
	Staff facilities are not significantly constraining achievement of major objectives.	Good		
	Inadequate staff facilities constrain achievement of some management objectives.	Fair		
	Inadequate staff facilities mean that achievement of major objectives is constrained.	Poor		

Issue	Criteria	Rating	Explanation/ Comments	Next Steps
10. Staff/management communication Does staff have the opportunity to feed into management decisions?	Staff directly participate in making decisions relating to management of the site at both site and management authority level.	Very Good	The park director participates in the reporting necessary for decision making.	
	Staff directly contributes to some decisions relating to management.	Good		
	Staff has some input into discussions relating to management but no direct involvement in the resulting decisions.	Fair		
	There are no mechanisms for staff to have input into decisions relating to the management of the World Heritage Site.	Poor		
11. Personnel management How well is staff managed?	Provisions to ensure good personnel management are in place.	Very Good	Includes details on the types of human resource management systems that are being implemented	
	Although some provisions for personnel management are in place these could be improved.	Good		
	There are minimal provisions for good personnel management.	Fair		
	There are no provisions to ensure good personnel management (e.g. staff appraisals, grievance procedures, promotion plans, insurance).	Poor		
12. Staff training Is staff adequately trained?	Staff training and skills are appropriate for the management needs of the site, and with anticipated future needs.	Very Good	There is no permanent training but the staff arrives already trained.	This year training needs are being met by human resources.
	Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management	Good		
	Staff training and skills are low relative to the management needs of the site.	Fair		
	Staff lack the skills/training needed for effective site management.	Poor		

Issue	Criteria	Rating	Explanation/ Comments	Next Steps
13. Law enforcement Does staff have the capacity to enforce legislation?	The staff has excellent capacity/resources to enforce legislation and regulations.	Very Good	INPARQUES procedures are administrative (sanctions or authorizations) and not penalties.	
	The staff has acceptable capacity/resources to enforce legislation and regulations but some deficiencies remain.	Good		
	There are major deficiencies in staff capacity/resources to enforce legislation and regulations (e.g. lack of skills, no patrol budget, staff management problems).	Fair		
	The staff has no effective capacity/resources to enforce legislation and regulations.	Poor		
14. Financial Management Does the financial management system meet the critical management needs?	Financial management is excellent and contributes to effective management of the site.	Very Good	Covers whether audits are being done regularly and if the results are being incorporated.	
	Financial management is adequate but could be improved.	Good		
	Financial management is poor and constrains effectiveness.	Fair		
	Financial management is poor and significantly undermines effectiveness of the World Heritage Site (e.g. late release of funds for the financial year).	Poor		
Resource Management				
15. Managing resources Are there management mechanisms in place to control inappropriate land uses and activities (e.g. poaching)?	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented.	Very Good	Decree 1640 (Land Use and Regulation Plan for the Eastern Sector of CNP) and Decree 276 of the Land Use Act (relative to management of national parks and natural monuments).	
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them.	Good		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are major problems in implementing them effectively.	Fair		
	There are no management mechanisms for controlling inappropriate land use and activities in the World Heritage Site.	Poor		

Issue	Criteria	Rating	Explanation/ Comments	Next Steps
16. Resource inventory Is there enough information to manage the World Heritage Site?	Information on the critical habitats, species and cultural values of the World Heritage Site is sufficient to support planning and decision making and is being updated	Very Good		
	Information on the critical habitats, species and cultural values of the protected area is sufficient for some areas of planning/decision making but further data gathering is not being carried out.	Good		
	Some information is available on the critical habitats, species and cultural values of the World Heritage Site, but this is insufficient to support planning and decision making.	Fair		
	There is little or no information available on the critical habitats, species and cultural values of the World Heritage Site.	Poor		
17. Research Is there a program of management orientated survey and research work?	There is a comprehensive, integrated program of surveys and research, which is relevant to management needs.	Very Good		
	There is considerable survey and research work but it is not directed towards the needs of World Heritage Site management.	Good		
	There is some ad hoc survey and research work but it is not directed towards the needs of World Heritage Site management.	Fair		
	There is no research taking place in the World Heritage Site.	Poor		
18. Ecosystems and species Is the biodiversity of the World Heritage Site managed adequately?	Requirements for management of critical ecosystems and species are being fully implemented.	Very Good	There is a list of focal species and critical habitats whose management requirements have not been evaluated.	
	Requirements for management of critical ecosystems and species are only being partially implemented.	Good		
	Requirements for management of critical ecosystems and species are known but are not being implemented.	Fair		
	Requirements for management of critical ecosystems and species have not been assessed.	Poor		

Issue	Criteria	Rating	Explanation/ Comments	Next Steps
19. Cultural/ historical resource management Are the site's cultural resources adequately managed?	Requirements for management of cultural/ historical values are being substantially or fully implemented.	Very Good		
	Many requirements for management of cultural/historical values are being implemented but some key issues may not be addressed.	Good		
	Requirements for management of cultural/ historical values are known but very few are being implemented.	Fair		
	Requirements for management of cultural/ historical values have not been assessed and/or active management is not being undertaken.	Poor		
Management and Tourism				
20. Visitor facilities Are visitor facilities (for tourists, pilgrims, etc.) adequate?	Visitor facilities and services are excellent for current levels of visitation.	Very Good	Valid especially for high season (Carnaval and Semana Santa)	
	Visitor facilities and services are adequate for current levels of visitation but could be improved.	Good		
	Visitor facilities and services are inappropriate for current levels of visitation.	Fair		
	There are no visitor facilities and services despite an identified need.	Poor		
21. Commercial tourism Do commercial tour operators contribute to protected area management?	There is good co-operation between managers and tourism operators to enhance visitor experiences, and protect site values	Very Good		
	There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain site values.	Good		
	There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters.	Fair		
	There is little or no contact between managers and tourism operators using the protected area.	Poor		

Issue	Criteria	Rating	Explanation/ Comments	Next Steps
22. Visitor opportunities Have plans been developed to provide visitors with the most appropriate access and diversity of experience when visiting the World Heritage Site?	Implementation of visitor management policies and programs is based on research into visitors' needs and wants and the carrying capacity of the World Heritage Site.	Very Good	Some isolated actions are being carried out to offer visitors more appropriate and diversified access to experiences when they visit a World Heritage Site.	
	Consideration has been given to the provision of visitor opportunities and policies and programs to enhance visitor opportunities are being implemented.	Good		
	Consideration has been given to the provision of visitor opportunities in terms of access to the World Heritage Site or the diversity of available experiences but little or no action has been taken.	Fair		
	No consideration has been given to the provision of visitor opportunities in terms of access to the World Heritage Site or the diversity of available experiences.	Poor		
23. Education and awareness program Is there a planned education program?	There is a planned, implemented and effective education and awareness program fully linked to the objectives and needs of the World Heritage Site.	Very Good	Nevertheless, a proposal is being made to create an Education Program	
	There is a planned education and awareness program but there are still serious gaps either in the plan or in implementation.	Good		
	There is a limited and ad hoc education and awareness program, but no overall planning for this.	Fair		
	There is no education and awareness program.	Poor		
24. Access Is visitor access sufficiently controlled?	Protection systems are largely or wholly effective in controlling access to the site in accordance with objectives.	Very Good		
	Protection systems are moderately effective in controlling access to the site in accordance with objectives.	Good		
	Protection systems are only partially effective in controlling access to the site in accordance with objectives.	Fair		
	Protection systems (patrols, permits etc) are ineffective in controlling access to the site in accordance with objectives.	Poor		

Issue	Criteria	Rating	Explanation/ Comments	Next Steps
Management and communities/neighbors				
25. Local communities Do local communities resident in or near the World Heritage Site have input to management decisions?	Local communities directly participate in all relevant management decisions for the site.	Very Good	Las Claritas is a community near a World Heritage Site.	
	Local communities directly contribute to some relevant management decisions but their involvement could be improved.	Good		
	Local communities have some input into discussions relating to management but no direct involvement in decision-making.	Fair		
	Local communities have no input into decisions relating to the management of the World Heritage Site.	Poor		
27. Local, peoples welfare Are there programs developed by the World Heritage managers which consider local people's welfare whilst conserving the sites resources?	Programs to enhance local, indigenous and/or traditional peoples welfare, while conserving World Heritage Site resources, are being implemented successfully.	Very Good	There are no programs, only isolated actions.	
	Programs to enhance local, indigenous and/or traditional peoples welfare, while conserving World Heritage Site resources, are being implemented but could be improved.	Good		
	Programs to enhance local, indigenous and/or traditional peoples welfare, while conserving World Heritage Site resources, exist but are either inadequate or are not being implemented.	Fair		
	There are no programs in place which aim to enhance local, indigenous and/or traditional peoples welfare.	Poor		
27. State and commercial neighbors Is there cooperation with neighboring land/sea owners and users?	There is regular contact between managers and neighboring official or corporate land/sea users, and substantial co-operation on management.	Very Good	Canaima's state neighbors include the government of Bolivar, CVG-Edelca, and the municipalities of Great Savannah and Sifontes. Commercial neighbors are identified as touristic operations.	
	There is contact between managers and neighboring official or corporate land/sea users, but only some cooperation.	Good		
	There is contact between managers and neighboring official or corporate land/sea users but little or no cooperation.	Fair		
	There is no contact between managers and neighboring official or corporate land/sea users.	Poor		

Issue	Criteria	Rating	Explanation/ Comments	Next Steps
28. Conflict Resolution If conflicts between the World Heritage Site and stakeholders arise, are mechanisms in place to help find solutions?	Conflict resolutions mechanisms exist and are used whenever conflicts arise.	Very Good	Use conflicts, authority Forums for dialogue	
	Conflict resolutions mechanisms exist but are only partially effective.	Good		
	Conflict resolution mechanisms exist, but are largely ineffective.	Fair		
	No conflict resolution mechanisms exist.	Poor		

WORKSHEET 8b TOOL 8. Summary Assessment of Management Processes

Management Area	Issue and rating	Distribution of rating (VG, G, F or P)*
Management Structures and Systems	1 World Heritage Values	1. F
	2 Management Planning	2. P
	3 Planning Systems	3. P
	4 Regular work plans	4. G
	5 Monitoring and evaluation	5. F
	6 Reporting	6. F
	7 Maintenance of Equipment	7. F
	8 Management Infrastructure	8. F
	9 Staff facilities	9. F
	10 Staff management communication	10. F
	11 Personnel management	11. F
	12 Staff training	12. G
	13 Law enforcement	13. F
	14 Financial management	14. P
Resource management	15 Resource management	15. F
	16 Resource Inventory	16. F
	17 Research	17. G
	18 Ecosystems and species	18. P
	19 Resource management	19. P
Management and Tourism	20 Visitor Facilities	20. F
	21 Commercial Tourism	21. F
	22 Visitor opportunities	22. F
	23 Education and awareness program	23. P
	24 Access	24. F
Management and Communities/Neighbors	25 Local communities	25. F
	26 Local, people welfare	26. P
	27 State and commercial neighbors	27. G
	28 Conflict resolution	28. G

* VG=Very Good, G= Good, F= Fair, P= Poor

WORKSHEET 8c FOR TOOL 8. Management efficiency evaluation results July 2007

ÁREA	INDICATORS	RATING ²	OBSERVATIONS
Social	• Partners' participation in all the aspects of the PA planning, managing and decisions making	3	Partners take part of some of the PA's planning activities.
	• Visitor satisfaction related to touristic services	2	Less than 25% of visitors are satisfied with services.
	• Visitor satisfaction related to quality of the experience	1	There is not enough evidence to evaluate this indicator.
	• Satisfaction of local residents	1	There is not enough evidence to evaluate this indicator.
Administrative	• Maintenance of equipment	2	There is a maintenance plan but is not being implemented
	• Maintenance of infrastructure	1	The maintenance plan for infrastructure does not exist
	• Staff satisfaction	1	There is not enough evidence to evaluate this indicator.
	• Changes of protected area staff	4	In a two-year period, staff changes vary between 21% and 40%.
Natural and Cultural Resources	• Compatible use in the protected area	2	The use is compatible with the area's objectives and it is decreasing
	• Incompatible use in the protected area	1	There is incompatible use and it's growing.
	• Impact over natural resources	4	Impact over natural resources in 21 to 40% of the PA.
	• Impact over communities	1	There is not enough evidence to evaluate this indicator.
	• Impact of the monitoring plan for the protected area	2	A few but regular illegal actions or prohibited activities, like mining

² Indicators are rated from 1 to 5, lowest to highest.

ÁREA	INDICATORS	RATING ²	OBSERVATIONS
	<ul style="list-style-type: none"> Research with regulations and follow up 	3	There are regulations for research, but no follow up.
	<ul style="list-style-type: none"> Documented and assessed connectivity of the protected area 	2	PA's current connectivity is in the process of being evaluated
	<ul style="list-style-type: none"> Law enforcement 	3	There are legal procedures; but there are doubts about if they are 100% appropriate.
Political/Legal	<ul style="list-style-type: none"> Administrative and technical autonomy for the protected area 	3	The PA has autonomy on administrative and technical issues, but sometimes must consult with the main office.
	<ul style="list-style-type: none"> Relationships of the protected area and stakeholders 	4	Relationships with up to 50% of the organizations with current projects.
Economic/ Financial	<ul style="list-style-type: none"> Partners recognize services in the protected area 	3	Between 25-50% of the partners recognize the PA services
	<ul style="list-style-type: none"> Partners receive direct benefits 	4	Between 51-75% of the partners receive some kind of direct benefit

SECTION 6. PRODUCTS

TOOL 9. RESULTS FROM THE SECOND MANAGEMENT EFFECTIVENESS EVALUATION (PRODUCTS)

Product evaluations investigate whether the work plan or program has been implemented and what are the results or products from the management process.

The second management effectiveness workshop of August 2007 did not consider the different areas of study (social, administrative, political, legal, natural and cultural resources, economic, financial), thus there is no quantitative evaluation of management effectiveness with respect to processes or products.

Nevertheless, for the management product evaluation, as well as in Worksheet 8c, the evaluation used the second management effectiveness evaluation as its base which is reflected in Tool 9.

WORKSHEET FOR TOOL 9. Results of the management effectiveness evaluation in July 2007

AREA	INDICATORS	RATING	OBSERVATIONS
Social	• Communication plan implemented and assessed	2 ³	The communication needs have been identified or some isolated actions. There is a communication strategy as a result of the EoH.
	• Environmental education plan for the protected area	1	The environmental education plan does not exist.
Administrative	• Internal access to management	4	51-75% of the area is accessible and allows full management. There is access to the threats map.
	• Proper equipment for management	2	Protected area has up to 25% of proper equipment for efficient management.
	• Management infrastructure	3	26-50% of the infrastructure for efficient management has been built
	• Protected area signs	2	There is a signposting plan but is not being implemented due to the lack of funds.
	• Necessary staff required for the management of the protected area	3	The area has 26 to 50% of the staff required for basic management.
	• Staff training for management of the area	3	26 to 50% of the staff is trained to do their job
	• Protected area volunteers	2	There is random help from volunteers
	• Updated and ongoing management plan for the protected area	1	Management plan does not exist
	• Implemented operative plan for the protected area	1	Operative plan does not exist
	• Analysis of the area's threats	3	Threats identified and prioritized; there are not management actions to handle some of the threats
Natural and Cultural Resources	• Monitoring plan for the protected area	4	There is a surveillance plan and it is in operation between 31 and 60%.
	• Demarcated limits of the protected area	1	Limits of the PA are not demarcated.
	• Protected area research program	2	There is not a research program. There are some isolated research projects non relevant to management.

³ Indicators are rated from 1 to 5, lowest to highest

AREA	INDICATORS	RATING	OBSERVATIONS
	<ul style="list-style-type: none"> Systematized Information of the protected area 	4	There is enough data to offer support to the PA's administration
	<ul style="list-style-type: none"> Principal conservation objects (PCO) identified and studied in the area 	4	The PCO are identified. There is little information available about them for the field staff.
	<ul style="list-style-type: none"> Registered abiotic factors of the protected area 	5	There are more than 5-year data records about the main abiotic factors of interest for the PA.
Political/Legal	<ul style="list-style-type: none"> Protected area with zoning plan and regulations 	1	There is a ZPR for the Oriental Sector, but it needs to be reviewed. The entire area, however, should have zones and regulations.
Economic/ Financial	<ul style="list-style-type: none"> Long-term financial plan for the protected area 	3	There is no plan for long-term financing, there are funding mechanisms working, the income is insufficient
	<ul style="list-style-type: none"> Availability of generated income 	2	The PA is able to use generated income to cover up to 25% of the required investments
	<ul style="list-style-type: none"> Area with identified and valued goods and services 	2	The PA has identified its goods and services up to 25%.

TOOL 10. EVALUATION OF MANAGEMENT PRODUCTS ACROSS SELECTED INDICATORS

The Enhancing Our Heritage Project produced out two proposals for monitoring plans around the values of water and tourism areas. Worksheet for Tool 10 presents there indicators used for these proposals.

Worksheet for Tool 10. Indicators for the work products

Indicator	Minimum Integrity Threshold	Existing information: Standards
Quantity and condition of signs	80% of existing signage should be in better condition by the end of the monitoring plan (5 years)	All tourism areas have at least two kinds of signage: one for orientation and the other for regulation. Currently on 33.3% of signage in the Western Sector and 27% in the Eastern are in good shape in terms of wood and treatment
Quantity of visitors in the Western and Eastern Sectors	Quantity of visitors in the tourism areas should increase at least 20% annually	The number of visitors in the park has increased by more than 50% in recent years and this situation tends to grow worse given the advertising that results from the area's designation as a tourism development zone.
Presence of solid waste in the tourism zone (ZITR).	There should not be any solid waste outside of sites specifically for its management. Absence of odors close to solid waste containers Absence of rodents or flies	There is a master plan for solid waste management in the Great Savannah. Two committees have already formed Kavanayén and Iboribó. For Canaima Lagoon there is a solid waste management plan. There are no systematic data about how much solid waste is generated in each tourism zone in the park and even less about how is outside the solid waste receptacles, therefore the first data to come will serve as the baseline.
Visitor satisfaction	Hopefully the visitors are at least somewhat satisfied and that their principal activity is ecotouristic (direct contact with nature and indigenous communities).	The Mayu Project, carried out by various area institutions and traveler groups that work during the park's high season, includes information about visitor satisfaction. Nevertheless, there is no information and therefore the first data to come will serve as the baseline.

Indicator	Minimum Integrity Threshold	Existing information: Standards
<p>Water quality in tourism zones</p>	<p>There are several categories of water in the park. Subtype A1, according to Decree 883, "Rules for the classification and quality control of water bodies and liquid flows," (G.O. No. 5021 [18 December 1995]). These waters are for both domestic and industrial use. The water can be treated with the simple addition of disinfectants.</p> <p>The following standards are used:</p> <p>Dissolved oxygen (mg/l): For this kind of water, it must be greater than 4 mg/l.</p> <p>Total coliform bacteria (NMP): The average of at least five monthly samples should be fewer than 1000 bacteria/100 mL</p> <p>Fecal coliform bacteria (NMP): Average of at least five monthly samples should be fewer than 100 bacteria/100 mL</p> <p>Water pH. For this type, pH can fluctuate between 6 and 8.5</p> <p>Total dissolved solids (mg/l). For this type of water the maximum value should be 1500 mg/l. The minimum value for each body of water near a tourism area should also be determined.</p>	<p>Bodies of water in the park, because they are only lightly contaminated and because they are in a protected area with low population density, can be classified as Type 1, Subtype 1A. CVG-Edelca has been sampling water for almost 40 years in the park. They have a few standard values for some of the selected parameters to determine water quality.</p> <p>Data reported by CVG-Edelca on dissolved oxygen in water from the Caroní Watershed fluctuates between 6-9 mg/l.</p> <p>Total coliform bacteria count is less than 1000 bacteria/100 ml across at least five monthly samples.</p> <p>Fecal coliform bacteria count across five monthly samples is less than 100 bacteria/100 ml.</p> <p>For Canaima water bodies, the pH is less than 7.</p> <p>The minimum range for each water body near tourism zones should be established.</p>

SECTION 7. RESULTS

The evaluation used biodiversity health and state of threats in the park as the basis for the management evaluation. These results were part of the OFM study and the product of the EoH follow up workshop in June 2003.

Biodiversity Health: Conservation of Site Values

To determine biodiversity health, the study evaluated size, condition, and landscape context for each of the site values, using rankings of very good, good, regular, or poor.

In general terms, the site values have a regular state of conservation or health. Three of the eleven values were good. These were the Tepuyan Formations, water (volume and quantity), and herbs and bushes on turbas. Table 1 details the rankings for all site values.

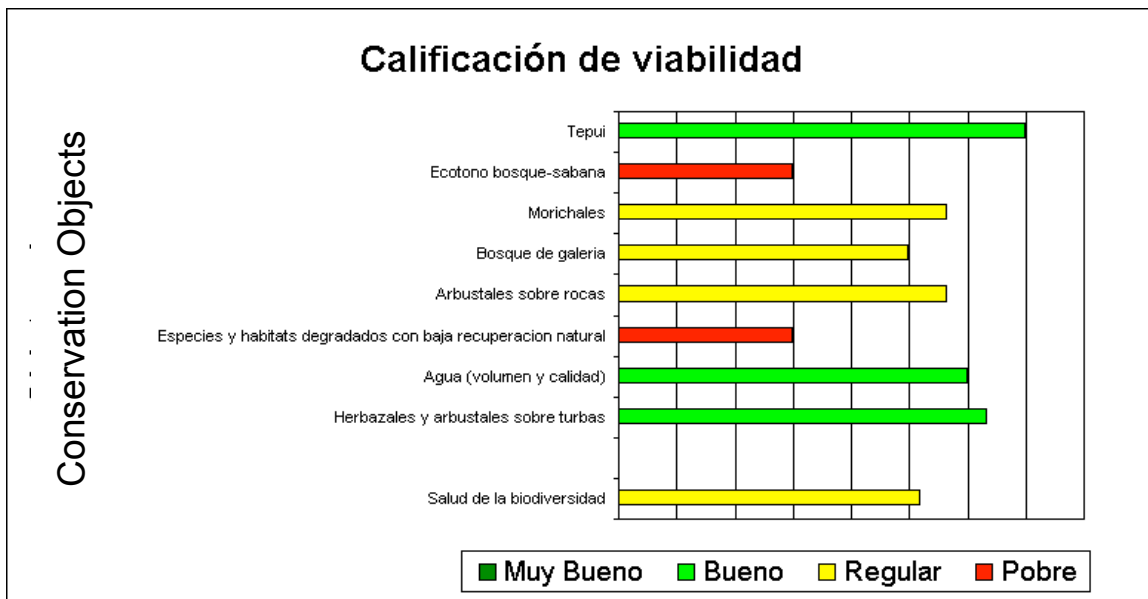
Table 1. Conservation Status of site values at Canaima National Park, June 2003

VALUES OF THE SITE/PCO	Size	Condition	Landscape context	Average Hierarchical Value of Viability
Tepuyan Formations	Good	Good	Good	Good
Savannah-forest Ecotone	Regular	Poor	Poor	Poor
Morichales	Good	Regular	Regular	Regular
Gallery Forest	Regular	Regular	Regular	Regular
Bushes on rocks	Good	Regular	Regular	Regular
Threatened species, and degraded habitats with low natural regeneration	Regular	Poor	Poor	Poor
Water (Volume and quality)	Very Good	Regular	Regular	Good
Grasses and bushes on turbas	Good	Good	Regular	Good
Zones of touristic interest	Good	Regular	Poor	Regular
Areas of resources utilization by local communities	Regular	Poor	Poor	Poor
Human Settlements	Regular	Regular	Regular	Regular
Health or Conservation Status of the Canaima National Park				Regular

Table 2. Conservation Measures of Success

Site	Canaima National Park		
Conservation Objects	Tepuy	Site-wide rating for biodiversity health	Regular
	Savannah-forest Ecotone		
	Morichales	Global threat rating	High
	Gallery Forest		
	Bushes on rocks		
	Threatened species, and degraded habitats with low natural regeneration	Global capacity	High
	Water (Volume and quality)		
	Grasses and bushes on turbas		

Table 2 shows the conservation measures of success for key elements. The global rating for biodiversity health is regular and the global threat rating is high. These results came from the follow up workshop in June 2003. Note that the conservation objects exclude those site values that do not aim to conserve biodiversity such as human settles, tourism zones, and areas where local communities exploit resources.



The previous graphic shows that biodiversity health for given conservation objects is “regular.” In particular the conservation objects Tepuy, water, herbs on turbas are “good” while morichales, gallery forest, and bushes on rocks are “regular” as well. The forest-savannah ecotone and the degraded species and habitats with low recovery rates are “poor.”

Summary of project results

- ✓ Initial evaluation of the park context
- ✓ Stakeholder identification for park management
- ✓ Identification of values (resources) where management efforts will be directed, or site values. The 11 identified OFMs are water, forest-savannah ecotone, Tepuyan Formations, morichales, gallery forest, bushes on rocks, threatened species and degraded habitat, bushes and herbs on turbas, tourism zones, human settlements, and traditional use areas.
- ✓ Area prioritization (Land Use and Regulation Plan, design of a monitoring plan for the OFM water and tourism zones, signage program, and design of an information and communication program)
- ✓ Bibliographic database (MS Access) for the park (more than 650 references)
- ✓ Neutral stakeholder analysis for the information and communication program
- ✓ Guidelines for the development of a communication plan
- ✓ Production of materials about the park in Spanish, Pemon and English
- ✓ Electronic bulletin by Enhancing Our Heritage in CNP
- ✓ Define biodiversity health and initial appraisal of indicators for OFM, as the basis for the design of a permanent monitoring program.
- ✓ Mapping site values
- ✓ Support for park signage in the Eastern Sector of the park (Spanish, Pemon)
Introductory workshop to develop a Land Use and Regulation Plan for the park.
The synergies between processes of planning and delimiting were identified.
- ✓ Development of a proposal for park signage
- ✓ Development of a proposal for water monitoring
- ✓ Development of a proposal for a monitoring plan in tourism zones.
- ✓ The first and second management effectiveness evaluation workshops (2004-2007), incorporating five aspects: social, administrative, natural and cultural, financial, and political-legal. The evaluation described the park context and constructed an optimal five-year scenario. The evaluation rating varied between 1 and 5, 1 being lowest and five highest. It used 43 indicators such as stakeholder participation in planning, management and decision making in a protected area,

park threats, signage, personnel training, personnel turnover, environmental education, physical installations, installation maintenance, management plan, Land Use and Regulation plan, and financial plan.

- ✓ Priorization of park threats. Some of the 27 threats include fire, unmanaged tourism, non-metallic mining in the park, metallic mining near the park, solid waste, agriculture, and lack of policies to promote sustainable management. In general, the threats in 2004 held steady and intensified in 2007, thus urgent action is needed.
- ✓ Nearly 50% of indigenous communities participated in the management effectiveness evaluation workshops.
- ✓ More than 100 people from 30 institutions and indigenous communities participated in the project.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

- ✓ Enhancing Our Heritage methodology that evaluates the management effectiveness of protected areas considers all aspects proposed in the CMAP framework. It is flexible, participatory, and unifies the vision of all stakeholders with reference to park objectives. While the methodology is complete, it is not rapid and requires a great investment in both time and human resources. It also requires a management plan and baseline in order to evaluate management effectiveness.
- ✓ It proves an important source for country reports required by UNESCO.
- ✓ It was a great challenge to support and evaluation park management without either a management plan or operational plan.
- ✓ In general the threats identified in 2004 held steady and intensified in 2007, thus urgent action is required.
- ✓ In order to evaluate an area's management, the availability and support of park staff and indigenous communities is very important.
- ✓ The great size of the park and the budgetary deficiencies obstruct the management and implementation of the methodology.
- ✓ INPARQUES staff training in this methodology has awakened an interest in replicating the experience in other protected areas.
- ✓ Some of the most important management weaknesses include high staff rotation in INPARQUES, limited time of the field staff, limited economic resources, huge size and difficult access, stakeholder numbers and diversity, absence of a formal mechanism to exchange information, lack of a community plan (internal and external), and absence of appropriate leadership.

RECOMMENDATIONS

- ✓ Use the information from this methodology as the source for reporting to UNESCO
- ✓ Follow up on implementing the proposals on signage, water and tourism zone monitoring, that came out of the project
- ✓ Continue with Canaima's database and make it available for interested users
- ✓ Coordinate efforts to carry out a management plan. To this end, there is a meeting planned for the end of November to coordinate actions under the leadership of the Environment Office of the Bolivar Government
- ✓ Develop a Land Use and Regulations Plan for the Western Sector of the park or develop one for the entire park
- ✓ Coordinate efforts across institutions to mitigate threats to the CNP

REFERENCES

Azuaje, A. (2000). **Promoción de la Participación de las comunidades en el manejo y conservación de la cuenca alta de los ríos Caroní y Cuyuní.** CVG-EDELCA, Gerencia de Gestión Ambiental, Programa de Participación Comunitaria. Informe mimeografiado.

Blanco Rivero, C. 2002. **Coordinación de Taller para la Facilitación de Diálogo y Negociación con Actores Claves sobre el Tema y la Actividad Ecoturística en Parques Nacionales.** Consultoría contemplada en el Componente Fortalecimiento Institucional, Sub-componente Asistencia Técnica del Proyecto "Sistema Nacional de Parques" en el marco de Convenio de Préstamo BM 3902-VE. Caracas.

Bolívar, Y. (2001). **Identificación y validación de proyectos de uso alternativo de recursos en la comunidad de San Ignacio de Yuruaní, Municipio Gran Sabana, Edo. Bolívar.** CVG-EDELCA, INCE, CEDIG.

Cámara de Turismo de la Gran Sabana. (2002). **Campamentos, hoteles, posadas y operadoras ubicados en la Gran Sabana, Venezuela.** Mimeografiado, 6 p. Santa Elena de Uairén.

Courrau, J. 2004. **Manejo del Turismo en el Monumento Natural Marino Cayos Cochinos, Honduras. Límites de cambio aceptable en la protección de los recursos naturales y experiencias de los visitantes en zonas de interés turístico.** WWF. Centroamérica. San José, Costa Rica.

CVG, CVG-EDELCA (2004). **La cuenca del río Caroní. Una visión en cifras.** María Elena Corrales (editora). Editorial EXLIBRIS, Caracas. 243 p.

CVG, CVG-EDELCA, Alcaldía del Municipio Autónomo Gran Sabana (2002). **Programa Mayú.** Borrador, Santa Elena de Uairén.

CVG-EDELCA (1998). **Taller de Evaluación rural participativa para las comunidades: San Ignacio de Yuruaní y Kavanayen.** División de Cuencas e Hidrología. Departamento de Conservación de Cuencas, Sección de Extensión y Divulgación. Mimeografiado, 10 pp.

CVG-EDELCA (2002). **Sistema de Información para el control de incendios (SIPCV).** Base de datos. Puerto Ordaz, Santa Elena.

CVG-EDELCA (2004). **Estudio Plan Maestro de la Cuenca del río Caroní.**

CVG-EDELCA, Ministerio de Industrias Básicas y Minería & Alcaldía Gran Sabana. 2005. **Cooperativas Pemón de Ecoturismo: ¡La Nueva Gran Sabana!** Revista Aronin. Edición Especial, Publicación Bilingüe para la divulgación del Programa Mayú, Año 2, No. 5, Santa Elena de Uairén, Septiembre 2005.

CVG-EDELCA. 2004. **La Cuenca del río Caroní. Una visión en cifras.** María Elena Corrales (Editora). Editorial Exlibris, Caracas 243 p.

Dezseo, N. (Ed.). (1994). **Ecología de la Altiplanicie de la Gran Sabana (Guayana Venezolana)** I. En Scientia Guaianae 4.

Drumm, A. & Moore, A. 2005. Desarrollo del Ecoturismo. Un manual para profesionales de la conservación. **Volumen I. Introducción a la Planificación del Ecoturismo.** Segunda edición.

The Nature Conservancy, Arlington, Virginia, USA. 102 p.

Drumm, A., A. Moore, Soles, A. Patterson, C. & Terborgh, J. 2004. Desarrollo del Ecoturismo. Un manual para profesionales de la conservación. **Volumen II. Desarrollo y Manejo del Ecoturismo**. The Nature Conservancy, Arlington, Virginia, USA. 116 p.

Ecology and Environment, S.A. 2003. **Evaluación del Impacto del Turismo en el Parque Nacional Canaima**. Informe Final. Componente de Investigación Ambiental. Proyecto de Manejo del Sistema Nacional de Parques. Convenio BIRF 3902-VE. INPARQUES.

García, R. (2002). **Integración de comunidades indígenas en la planificación y manejo de áreas protegidas**. Informe final (mimeografiado). Hamburgo.

Gil Beroes, M.E. 2003. **Parque Nacional Canaima. Patrimonio Mundial Natural de la Humanidad**. Revista Ambiente. Ministerio del Ambiente y de los Recursos Naturales, Año 25, No. 64. Caracas.

Gobernación del Estado Bolívar. 2002. **Metas propuestas y adelantadas por la Dirección de Ambiente de la Gobernación del Estado Bolívar en el Parque Nacional Canaima**. Informe, 6 pp. Ciudad Bolívar. González, N. 2005. **Propuesta para el Manejo Administrativo de la Red de Oficinas de Enlace con la Dirección Regional Bolívar del Instituto Nacional de Parques**. Proyecto de Grado en modalidad Pasantía de Grado presentado como requisito parcial para optar al título de Licenciada en Administración de Empresas. Escuela de Administración de Empresas, Fac. de Ciencias Económicas y Sociales, Universidad Gran Mariscal de Ayacucho. Núcleo Ciudad Guayana. 97 p.

Hernández, L. (Ed.). 1999. **Ecología de la Altiplanicie de la Gran Sabana (Guayana Venezolana) II**. En Scientia Guaianae 9.

Hernández, L. et al. 1994. **Nombres indígenas y usos de algunas plantas de bosques de la Gran Sabana: una introducción a la etnobotánica regional**. Acta Botánica Venezuela 17 (1, 2, 3 y 4).

Hockings, M., S. Stolton, N. Dudley y J. Parrish. 2002. **Mejorando Nuestra Herencia: Caja de Herramientas. Volumen I. Manual de Capacitación para el desarrollo de Sistemas de Monitoreo, Evaluación y Generación de Informes sobre la Efectividad de Manejo en los Sitios de Patrimonio Mundial**. Universidad de Queensland, UNESCO, UICN. 31p.

Hockings, M., S. Stolton, N. Dudley y J. Parrish. 2002a. **Mejorando Nuestra Herencia: Caja de Herramientas. Volumen II. Cuaderno de Ejercicios para diseñar Sistemas de Monitoreo, Evaluación y Generación de Informes sobre la Efectividad de Manejo en los Sitios de Patrimonio Mundial**. Universidad de Queensland, UNESCO, UICN. 145 p.

Hockings, M., S. Stolton y N. Dudley. 2002b. **Evaluación de la Efectividad. Resumen para los directores de parques y formuladores de la política de áreas protegidas**. Publicado por WWF y UICN. 9 p.

Hockings, M., F. Leverington y R. James. 2003. **Evaluando la Efectividad de Manejo: La conservación de las áreas protegidas ahora y en el futuro**. Un informe de antecedentes preparado para el V Congreso Mundial de Parques. Durban, Sudáfrica. UICN Comisión Mundial de Áreas Protegidas. 15 p.

Hockings, M., S. Stolton, N. Dudley, J. Courrau y J. Parrish. 2004. **Libro de Trabajo para la Efectividad de Manejo de Herencia Mundial**. Edición revisada. Universidad de Queensland, UNESCO, UICN. 109 p.

Hockings, M., S. Stolton, N. Dudley, J. Courrau, J. Parrish, James R. Mathur V. & Makombo, J. 2007. **Libro de Trabajo para la Efectividad del Manejo del Patrimonio Mundial: Edición 2007**. Tercer borrador. Universidad de Queensland, UNESCO, Fondo de Naciones Unidas, UICN, TNC. 123p.

Huber, O. 1995a. **Geographical and physical features**. En: Flora of the Venezuelan Guayana, Vol. I: Introduction. (P.E. Berry, B.K. Holst y K. Yatskievych, eds.), pp.1-61. Missouri Botanical Garden, St. Louis & Timber Press, Portland, Oregon.

Huber, O. 1995b. **Vegetation**. En: Flora of the Venezuelan Guayana, Vol. I: Introduction. (P.E. Berry, B.K. Holst y K. Yatskievych, eds.), pp.97-160. Missouri Botanical Garden, St. Louis & Timber Press, Portland, Oregon.

Huber, O. y G. Febres. 2000. **Guía Ecológica de la Gran Sabana**. The Nature Conservancy – Chevron. Caracas. 192 p.

Huber, O. & Febres, G (eds.). 2000. **Guía Ecológica de la Gran Sabana**. Primera edición. The Nature Conservancy, Ecograph, Caracas. 192 p.

INPARQUES, CVG-Edelca, Federación Indígena del Edo. Bolívar. 2006. **Expansión de Alianzas para el Sistema de Parques Nacionales**. Proyecto financiado por el GEF a través del Banco Mundial.

INPARQUES, Provita, Conservación Internacional Venezuela. 2005a. **Informe del Taller IV Taller del Plan de Desarrollo Turístico Sostenible del Sector Oriental del Parque Nacional Canaima**. Aponwao, 12 de abril 2005, material mimeografiado.

INPARQUES, Provita, Conservación Internacional Venezuela. 2005b. **Informe del Taller V Taller del Plan de Desarrollo Turístico Sostenible del Sector Oriental del Parque Nacional Canaima**. Aponwao, 14 y 15 de junio 2005, material mimeografiado.

INPARQUES, Provita, Conservación Internacional Venezuela. 2005c. **Informe del Taller VI Taller del Plan de Desarrollo Turístico Sostenible del Sector Oriental del Parque Nacional Canaima**. Aponwao, 27 y 28 de julio 2005, material mimeografiado.

INPARQUES, Provita, Conservación Internacional Venezuela. 2006. **Plan de Desarrollo Turístico Sostenible del Sector Oriental del Parque Nacional Canaima**, material mimeografiado en elaboración, octubre 2006.

Integral, Tecnoconsult y Palmaven 2001. **Plan Maestro de la Cuenca del Río Caroní. Volumen V. Prefactibilidad técnica y ambiental de proyectos**. Vol. V, Tomo II, Borrador, Caracas.

Junior, j., E. Rivas y R. Salas 2001. **Control de incendios de vegetación**. En: Revista EDELCA (V Jornadas Profesionales). Año XXIV. Tercera Época. N° 2 y 3 (Edición Especial). Caracas.

Kingsbury, N. 2001. **Impacts of land use and cultural change in a fragile environment. Indigenous acculturation and deforestation in Kavanayén, Gran Sabana, Venezuela**. En: Interciencia, Vol. 26, N° 8, pp. 327-336.

Margoluis, R. & Salafsky, N. 1998. **Medidas de Éxito: Diseño, Manejo y Monitoreo de Proyectos de Conservación y Desarrollo**. Traducción de "Measures of Success: Designing, Managing and Monitoring Conservation and Development Projects". Maryland, USA.

Medina, J., Croes, G. & Piña, I. 2005. **Evaluación de Políticas Públicas del Pueblo Pemón:**

Componentes socioeconómico y ambiental. Ministerio de Educación y Deportes, Dirección General de Asuntos Indígenas, EcoNatura, Federación Indígena del Edo. Bolívar y The Nature Conservancy Venezuela. 169 p.

MINTUR. **Canaima en el Desarrollo Endógeno del Turismo.** En www.mintur.gob.ve revisada 11/10/06. título Plan Integral de Desarrollo Endógeno Autosustentable del Sector Occidental del PN. Canaima, Eje Kanaimô-Kamarata-Kavac-Isla Ratón.

Novo, I. & Díaz Martín, D. 2005. **Proyecto “Mejorando Nuestra Herencia”.** Informe Actualizado de la Evaluación del Parque Nacional Canaima, Venezuela, como Sitio de Patrimonio Natural de la Humanidad (versión 2.0). VITALIS-INPARQUES. Caracas.

Novo, I. Morales, M, Cario, C. & Díaz Martín, D. 2006. **Propuesta Piloto de Plan de Monitoreo de las Zonas de Interés Turístico Recreativo del Parque Nacional Canaima.** Realizado en el marco del Proyecto Mejorando Nuestra Herencia en Canaima- Sitio de Patrimonio Mundial Natural, Caracas.

Novo, I. Morales, M, Cario, C. & Díaz Martín, D. 2007. **Informe II Taller Evaluación de la Efectividad de Manejo en el Parque Nacional Canaima.** Realizado en el marco del Proyecto Mejorando Nuestra Herencia en Canaima, Caracas.

Peñuela, S. & Novo, I. 2006. **Propuesta Preliminar Plan del Monitoreo del Objeto Focal Agua en el Parque Nacional Canaima.** Realizado en el marco del Proyecto Mejorando Nuestra Herencia en Canaima –Sitio de Patrimonio Mundial Natural, Caracas.

Pérez, E. 2002. **Impacto ambiental sobre los ecosistemas tepuyanos. Caso Roraima Fundama, La Ruta Tepuyana,** Informe mimeografiado, 12 pp. Santa Elena de Uairén.

Real, M. Rangel, J. Díaz Martín, D. & Invernón, A. 2002. **Informe Preliminar. Primer Año de Ejecución del Proyecto Mejorando Nuestra Herencia,** VITALIS-INPARQUES, Caracas, 62 p.

Rivera, R. 1998. **Bases para la zonificación del uso del Sector Occidental del Parque Nacional Canaima. Estado Bolívar.** Universidad Central de Venezuela, Escuela de Geografía. Trabajo Especial de Grado, 192 p. Caracas.

Rivero, E. 2006. **Propuesta Plan de Señalización del Parque Nacional Canaima.** Realizado en el marco del Proyecto Mejorando Nuestra Herencia en Canaima.-Sitio de Patrimonio Mundial Natural, Caracas.

Rome, A. 1999. **Monitoreo de los Impactos Turísticos: Un examen de metodologías y recomendaciones para el desarrollo de programas de monitoreo en América Latina.** Serie de Informes Técnicos Ecoturismo, No. 1. TNC, USAID, Alex C. Walter Foundation.

Rosabal, P. y J.P. De Oliveira. 1999. **Informe de la Misión UNESCO-UICN al PNC.** 11 p. Mimeografiado.

Schubert, C. y O. Huber. 1989. **La Gran Sabana. Panorámica de una región.** Cuadernos Lagoven. Caracas. 107 p.

Sharpe, Ch. 1998. **Manual de Monitoreo del Sistema Nacional de Parques de Venezuela.** Convenio EcoNatura - Wildlife Conservation Society - INPARQUES, Caracas.

Vanderpool-Wallace, V. 2005. CTO (Organización de Turismo Caribeño) News, Noviembre 2005, Volumen 5, Número 8.

Vélez, R. 2000. **La defensa contra incendios forestales**. Fundamentos y experiencias. Mc Graw Hill, España.

Venezuela. 2002. **La presentación de informes periódicos sobre la aplicación de la Convención del Patrimonio Mundial. Sección II. Estado de conservación de bienes específicos del Patrimonio Mundial. Caso: Parque Nacional Canaima**.

Venezuela. 1962. **Decreto de creación del Parque Nacional Canaima**. Gaceta Oficial No. 26.873 del 13/06/62.

Venezuela. 1971. **Decreto del Plan de Ordenamiento y Reglamento de uso del sector Oriental del Parque Nacional Canaima**. Gaceta Oficial No. 34.758 del 18/07/91.

Venezuela. 1975. **Ampliación del Parque Nacional Canaima**. Gaceta Oficial No. 30.809 del 01/10/75.

Venezuela. 1989. **Decreto 276. Reglamento Parcial de la Ley Orgánica para la Ordenación del Territorio sobre Administración y Manejo de los Parques Nacionales y Monumentos Naturales**. Gaceta Oficial Extraordinario del 09/06/89.

Venezuela. 1995. **Decreto No. 883. Normas para la clasificación y el control de la calidad de los cuerpos de agua y vertidos o efluentes líquidos**. Gaceta Oficial No. 5021, Extraordinario de fecha 18/12/95.

Venezuela. 2005. **Ley de Reforma Parcial del Decreto 1534**, con rango y fuerza de Ley Orgánica de Turismo, sancionada 31/05/05.

VITALIS. 2003. **Identificación de Indicadores de los Objetos Focales de Manejo del Proyecto Mejorando Nuestra Herencia en Canaima, Informe Final**. Consultoría realizada por Santeliz, K. Noviembre 2003.

Yáñez, E. (2002). **Diagnóstico, acciones y alcances por la Corporación Venezolana de Guayana en el Municipio Gran Sabana**. CVG-Vicepresidencia de Desarrollo Agrícola y Agroindustrial. Informe. Santa Elena de Uairén.

ANNEXES

Annex 1. Field data collection score sheet. Canaima National Park. Review of the optimal scenario 2004 vs. 2007

Indicators	Rating based on existing evidence		Observations
	2004	2007	
SOCIAL AREA			
<p>1. Ongoing Communication Plan and Assessment The protected area (PA) should communicate (both ways) and efficiently coordinate with partners.</p> <p>5= There is an ongoing communication plan, evaluated and oriented to produce a significant impact on the target population. 4= Plan is implemented and its impact evaluated in the target population. 3= There is a design of the plan and some actions are implemented. 2= The communication needs have been identified or some isolated actions. 1= There is not communication plan, nor isolated actions, nor the compliance to have one.</p>	2	2	
<p>2. Partners' participation (This promotes the principle of management democratization).</p> <p>5= Partners take part completely in all the aspects of the PA planning, managing and decisions making. 4= Partners take part of the PA planning, managing (but no in decisions making). 3= Partners take part of some of the PA planning activities. 2= Partners have expressed availability to participate, and the PA managers consult with them 1= Partners don't participate in the PA's planning and managing. Decisions are centralized.</p>	2	3	
<p>3. Environmental Education Plan for the Protected Area (PAs need an education plan to promote attitudes, knowledge, and values, according to the conservation and management objectives).</p> <p>5= Implements the Environmental Education Plan and evaluates its impact permanently. 4= Some of the actions of the Environmental Education Plan are implemented. 3= There is an Environmental Education Plan, but is not being implemented because of the lack of resources. 2= An Environmental Education Plan is being designed. 1= The Environmental Education Plan does not exist.</p>	1	2	
<p>4. Visitor's Satisfaction related to touristic services (Consider the interest of the PA in knowing, maintaining, and improving the quality of the recreational and/or touristic services for the visitors).</p> <p>5= More than 75% of the visitors are satisfied with the services. 4= Between 51 and 75% of the visitors are satisfied with the services. 3= Between 26 and 50% of the visitors are satisfied with the services. 2= Less than 25% of the visitors are satisfied with the services. 1= The visitors are not satisfied with the services.</p>	1		COULD NOT BE EVALUATED

Indicators	Rating based on existing evidence		Observations
	2004	2007	
5. Visitor's Satisfaction related to quality of the experience (Consider the interest of the PA in knowing, maintaining, and improving the quality of the experience for the visitors, for instance, concerning the conservation of the natural and cultural attractions they visited).			
5= More than 75% of the visitors are satisfied with the experience. 4= Between 51 and 75% of the visitors are satisfied with the experience. 3= Between 26 and 50% of the visitors are satisfied with the experience. 2= Less than 25% of the visitors are satisfied with the experience. 1= The visitors are not satisfied with the experience.			COULD NOT BE EVALUATED
6. Satisfaction of the local resident (Consider the interest of the PA in learning about the perception of communities and other local stakeholders, related to the touristic visitation).			
5= More than 75% of the visitors are satisfied with the visitors. 4= Between 51 and 75% of the visitors are satisfied with the visitors. 3= Between 26 and 50% of the visitors are satisfied with the visitors. 2= Less than 25% of the visitors are satisfied with the visitors. 1= The local residents are not satisfied with the visitors.			
ADMINISTRATIVE AREA			
7. Internal Access to Management (PA's staff and main partners should count with access for a comprehensive management of the area)			
5= 76-100% of the area is accessible and allows full management. 4= 51-75% of the area is accessible and allows full management. 3= 26-50% of the area is accessible and allows full management. 2= Up to 25% of the area is accessible and allows full management. 1= There is no access to manage the PA.	4	4	
8. Proper Equipment for Management (Staff should have enough, good quality equipment for efficient management of the protected area)			
5= Protected area has 76-100% of proper equipment for efficient management. 4= Protected area has 51 al 75% of proper equipment for efficient management. 3= Protected area has 26 al 50% of proper equipment for efficient management. 2= Protected area has up to 25% of proper equipment for efficient management. 1= Protected area doesn't have proper equipment for efficient management.	2	2	

Indicators	Rating based on existing evidence		Observations
	2004	2007	
<p>9. Maintenance of the Equipment (Promotes the maintenance of the PA's equipment, to ensure good management. Acquiring equipment is not enough, its maintenance is essential). The frequency of the maintenance depends on the equipment.</p>			
<p>5= 61 to 100% of the equipment receives maintenance. 4= 31 to 60% of the equipment receives maintenance. 3= Up to 30% of the equipment receives maintenance. 2= There is a maintenance plan but is not being implemented. 1= The maintenance plan does not exist.</p>	1	2	
<p>10. Management Infrastructure (Consider every aspect related to infrastructure that assists efficient management of the area)</p>			
<p>5= 76-100% of the infrastructure for efficient management has been built. 4= 51 to 75% of the infrastructure for efficient management has been built. 3= 26-50% of the infrastructure for efficient management has been built. 2= Up to 25% of the infrastructure for efficient management has been built. 1= There is not existing infrastructure for efficient management.</p>	3	3	
<p>11. Maintenance of the Infrastructure (Promotes the maintenance of the PA's infrastructure, to ensure good management.).</p>			
<p>5= 61 to 100% of the infrastructure receives maintenance. 4= 31 to 60% of the infrastructure receives maintenance. 3= Up to 30% of the infrastructure receives maintenance. 2= There is a maintenance plan but is not being implemented. 1= The maintenance plan for infrastructure does not exist.</p>	1	1	
<p>12. Protected Area Signs (Guides the visitor about the importance of the PA's resources and the visitor's security).</p>			
<p>5= 61 to 100% of the required signposting is existent. 4= 31 to 60% of the required signposting is existent. 3= Up to 30% of the required signposting is existent. 2= There is a signposting plan but is not being implemented. 1= The signposting plan does not exist.</p>	1	2	The Project Enhancing our Heritage developed a proposal for a signposting plan for the entire national park. INPARQUES is looking for funding for its implementation.
<p>13. Necessary staff required for the management of the protected area (Appropriate number of staff needed to accomplish a successful management).</p>			
<p>5= The area has 76 to 100% of the staff required for basic management. 4= The area has 51 to 75% of the staff required for basic management. 3= The area has 26 to 50% of the staff required for basic management. 2= The area has up to 25% of the staff required for basic management. 1= The area has not staff for basic management.</p>	2	3	It is estimated as ideal condition between 45 and 62 people for the managing of the park. Currently there are 26 people (According to Regional Director of Bolivar and Gonzalez's thesis, 2005 respectively).

Indicators	Rating based on existing evidence		Observations
	2004	2007	
14. Staff training for management of the area (Staff is adequately trained for the efficient and successful management of the PA).			
5= 76 to 100% of the staff is trained to do their job. 4= 51 to 75% of the staff is trained to do their job. 3= 26 to 50% of the staff is trained to do their job. 2= Up to 25% of the staff is trained to do their job. 1= Staff has not received appropriate training to do their job.	3	3	Tool 7. Evaluation of Management and Staff Needs, for INPARQUES.
15. Staff Satisfaction (Staff should be motivated and satisfied about working conditions).			
5= More than 80% of the staff is satisfied about the working conditions. 4= 61 to 80% of the staff is satisfied about the working conditions. 3= 41 to 60% of the staff is satisfied about the working conditions. 2= 21 to 40% of the staff is satisfied about the working conditions. 1= Less than 20% of the staff is satisfied about the working conditions.	1	1	An instrument was made to measure the degree of satisfaction of INPARQUES staff. Staff from the occidental sector answered the instrument, but it was no possible to have access to that information.
16. Changes of the Protected Area Staff (Staff should have job stability to avoid rotation of human resources, and at the same time to ensure that the administration and the management and training programs have continuity).			
5= In a two-year period, staff changes are not higher than 20%. 4= In a two-year period, staff changes vary between 21-40%. 3= In a two-year period, staff changes vary between 41-60%. 2= In a two-year period, staff changes vary between 61-80%. 1= In a two-year period, staff changes are higher than 81%.	3	4	Tool 7. There are records of staff rotation since February 2005. The evidence shows that 26% of the staff has left in the past two years.
17. Protected Area Volunteers (Empowers society and partners to conserve and protect the land and the resources, optimizing at the same time human and technical resources in the PA).			
5= There is an implemented volunteer program that fulfills the PA's management needs. 4= There is a volunteer program, but there is no follow up or evaluation. 3= A volunteer program is being designed and the mechanisms for its implementation are being identified. 2= There is random help from volunteers. 1= There is a need for volunteers, but not enough initiatives for the creation of a program.	2	2	
18. Updated and Ongoing Management Plan for the Protected Area (Every PA should have a management plan as their main tool for long-term planning, that should direct the management actions).			
5= Management plan concluded, with less than 5 years. Current and ongoing implementation of all the programs. 4= Management plan concluded and implementing some of the programs. 3= Management plan concluded, not implemented. 2= Management plan writing in process. 1= There is no management plan.	1	1	Tool 8. Assessment of Management Processes

Indicators	Rating based on existing evidence		Observations
	2004	2007	
19. Implemented Operational Plan for the Protected Area (The whole AP must have an operational plan, ideally, derived from a management plan. It is represented by annual plans that detail the goals and activities of the PAP for one particular year, preferably with the participation of the local actors).			
5= Implementing the operational plan, according to the management plan. 4= Partially implementing the operational plan. 3= Operational plan ready, but is not being implemented. 2= Operational plan in process. 1= An operational plan does not exist.	1	1	
20. Analysis of the Area's Threats (Helps to direct the management actions and to enhance the planning process).			
5= Threat analysis ready. Threats identified, prioritized, and treated by means of management actions. 4= Threats identified and prioritized; there are management actions to handle some of the threats. 3= Threats identified and prioritized; there are no management actions to handle the threats. 2= Threat analysis initiated 1= A threat analysis does not exist	4	3	- In July 2007 a threats analysis was carried out, separating the communities' opinion from the rest of the participants. It was found that the ranking of most of the threats increased in 2007 compared to the results from 2002 (Tool 2). - There is evidence from the Project Conservationist Semaphore for National Parks developed by VITALIS.
NATURAL AND CULTURAL RESOURCES AREA			
21. Types of Protected Area Use (The PA allows different uses according to its objectives and management categories).			
Compatible Use in the Protected Area			
5= The use is compatible with the area's objectives and grows in consonance with the management plan. 4= The use is compatible with the area's objectives and it is stable 3= The use is compatible with the area's objectives and it doesn't follow the regulations provided in the management plan. 2= The use is compatible with the area's objectives and it is decreasing 1= There is not a compatible use with the area's objectives	2	2	
Incompatible Use in the Protected Area (It refers to non-prohibited uses in prohibited sectors)			
5= There is not an incompatible use with the area's objectives. 4= There is incompatible use with the area's objectives, but they are random. 3= There is incompatible use and it's decreasing. 2= There is a stable incompatible use. 1= There is incompatible use and it's growing.	1	1	
22. Impact over Natural Resources (The assessment of impacts of any kind over the PA allows defining preventive measures for eventual actions that could cause problems in the area).			
5= Impact over natural resources in less than 20% of the PA. 4= Impact over natural resources in 21-40% of the PA. 3= Impact over natural resources in 41-60% of the PA. 2= Impact over natural resources in 61-80% of the PA. 1= Impact over natural resources in equal or more than 81% of the PA.	5	4	

Indicators	Rating based on existing evidence		Observations
	2004	2007	
23. Impact over Communities (Presents to the PA with the concern of measuring and preventing negative impacts, at the same time that promotes the positive ones from any kind of land use allowed in the area occupied by the communities of the PA and surrounding zones)			
5= There is no negative impact from the use. 4= Negative impact of use is less than 25%. 3= Negative impact of use oscillate between 26-50%. 2= Negative impact of use oscillate between 51-75%. 1= Negative impact of use is more than 75%.			
5= Positive impact of use in more than 90% of the communities. 4= Positive impact of use in 76-90% of the communities. 3= Positive impact of use in 51-75% of the communities. 2= Positive impact of use in 25-50% of the communities. 1= Positive impact of use in less than 25% of the communities.			
24. Surveillance Plan for the Protected Area (Every PA requires good control measures, patrols and protection to guarantee the conservation objectives have been met).			
5= There is a monitoring plan and it is in operation more than 61%. 4= There is a monitoring plan and it is in operation between 31% and 60%. 3= There is a monitoring plan and it is in operation up to 30%. 2= There is no monitoring plan, but there are some random actions. 1= There is no monitoring plan and there are not organized actions.	3	4	According to the Project Conservationist Semaphore for National Parks, most of the stakeholders agree that the surveillance plan of the area is enforced between 31-60%
25. Impact of the Monitoring Plan for the Protected Area (A successful plan guarantees that no illegal actions or activities will exist within the area).			
5= Very infrequent illegal actions, no prohibited activities. 4= Random illegal actions or prohibited activities. 3= Very few illegal actions or prohibited activities. 2= Few, but regular illegal actions or prohibited activities. 1= Illegal actions or prohibited activities out of control.	2	2	
26. Demarcated Limits of the Protected Area (To demarcate the limits is a priority, because that facilitates the management and surveillance, and also helps to maintain good relationships with neighbors). Demarcation can be natural or artificial.			
5= >75% of the limits are demarcated. 4= 51-75% of the limits are demarcated. 3= 26-50% of the limits are demarcated. 2= <25% of the limits are demarcated. 1= Limits of the PA are not demarcated.	3	1	According to Bioparques, 2003 (www.bioparques.org/documentos.htm) CNP does not have demarcation of its boundaries. The generation of the polygonal is descriptive and doesn't have coordinates. The area stakeholders have the perception that more than 50% of the area has demarcated limits.

Indicators	Rating based on existing evidence		Observations
	2004	2007	
27. Protected Area Research Program (The PA must organize its priorities and research efforts within a program, in order to contribute with the management of the area).			
5= There is a structured research program attuned to management needs. 4= There is a structured research program attuned to management needs, but only some actions are implemented. 3= There is not a research program but there is some research attuned to management needs. 2= There is not a research program. There are some isolated research projects non relevant to management. 1= There is neither a program nor research.	3	2	There are some isolated research projects relevant to management
28. Research with Regulations and Follow up (All research Developer in a PA should be based on regulations that should define the mechanisms to run the investigation). Authorizations from INPARQUES cover all the aspects that the regulations should include (participation and endorsement from indigenous communities, delivery of research advances and final report, and others)			
5= There are regulations and follow up for the research. 4= There are regulations but not much follow up for the research. 3= There are regulations but not follow up for the research. 2= There are no regulations, but there is follow up for the research. 1= There are neither regulations nor follow up for the research.	3	3	
29. Systematized Information of the Protected Area (Tidy, systematized, and accessible information is essential for the PA).			
5= There is a system in progress to register data, with useful information and technological resources. 4= Data registry system is simple but enough to offer support to the PA's administration. 3= Data registry system is partial, unorganized, not very functional. 2= Data registry system is incomplete, not well developed, unorganized. 1= There is not a system to register the PA's data.	3	4	There is some information from Parupa Station in addition to the research database currently developed by the Project Enhancing our Heritage.
30. Principal Conservation Objects (PCO) Identified and Studied in the area (To identify and document management objectives is crucial to predict any consequence on the ecosystems).			
5= The PCO were identified using scientific valid information and information about them exists and is available for the field staff. 4= The PCO are identified. There is little information available about them for the field staff. 3= There are identified PCO. 2= There are previous research actions to identify the PCO. 1= There is no information about the PCO of the PA.	4	4	Enhancing our Heritage in Canaima identified the PCO (Tool 1).
31. Documented and Assessed Connectivity of the Protected Area (PA's connectivity with other connected or semi connected ecosystems could allow the flow of species and genes).			
5= PA's current and potential connectivity has been assessed and it is well documented. 4= PA's current connectivity has been assessed and it is in the process of being documented. 3= PA's current connectivity has been assessed. 2= PA's current connectivity is in the process of being evaluated. 1= There is no information regarding the connectivity of the PA.	2	2	Evidence collected through the Project Conservationist Semaphore for National Parks

Indicators	Rating based on existing evidence		Observations
	2004	2007	
32. Registered Abiotic Factors of the Protected Area (Important part of the long-term environmental monitoring process, which could help with the understanding of how the ecosystems work).			
5= There is more than 5-year data records about the main abiotic factors of interest for the PA. 4= There is less than 5-year data records about the main abiotic factors of interest for the PA. 3= There is some data records about the main abiotic factors of interest for the PA. 2= There are efforts to initiate the data collection about the main abiotic factors of interest for the PA. 1= There is no existing information about the main abiotic factors of interest for the PA.	5	5	CVG-Edelca has been recording for the past 40 years the principal abiotic factors of the PA.
POLITICAL / LEGAL AREA			
33. Protected Area with Zoning Plan and Regulations (Demonstrates the importance of having efficient zoning, so the management can be more effective, according to Decree 276). Includes Use Regulations.			
5= There is zoning and use regulations implemented and evaluated. 4= Zoning and use regulations exist and are approved. 3= Zoning and use regulations exist but they are not approved 2= The development of the zoning plan and use regulations are in process. 1= Zoning and use regulations don't exist.	1	1	There exists a zoning plan and regulations of use approved for one sector of the Park. In 2004 there was an attempt of initiating the guidelines for the elaboration of the plan but it was not possible because of the lack of interest of the indigenous communities.
34. Law Enforcement (The PA should have the legal mechanisms to enforce the legislation that created the area).			
5= There are appropriate legal procedures for law enforcement and all the staff responsible to do it, understand them. 4= There are appropriate legal procedures for law enforcement, most of the staff responsible to do it, understand them, and there are programs for improvement. 3= There are legal procedures; but they are not 100% appropriate and not all the staff understand them. There are, however, programs for its improvement. 2= Insufficient procedures, staff with lack of understanding, and there are no programs for improvement. 1= Legal procedures for law enforcement don't exist.	3	3	The procedures from INPARQUES are administrative (for sanctions or authorizations) and not penal
35. Administrative and Technical Autonomy for the Protected Area (The administration of the area is influenced by new concepts of decentralization, deconcentration, and administrative authority that must be studied and monitored).			
5= The PA has autonomy on administrative and technical issues. 4= The PA has total autonomy on administrative and technical issues. 3= The PA has autonomy on administrative and technical issues, but sometimes must consult with the main office. 2= The PA has to consult many times with the main offices to make administrative and technical decisions. 1= The PA has no autonomy on administrative and technical issues.	1	3	Evidence obtained through the Project Conservationist Semaphore for National Parks.

Indicators	Rating based on existing evidence		Observations
	2004	2007	
36. Relationships of the Protected Area and stakeholders (The PA interact with several stakeholders represented by government and non-profit organizations, with close relationships between the stakeholders).			
5= There are ongoing agreements and relationships with more than 75% of the organizations involved with current projects. 4= Relationships with up to 75% of the organizations with current projects, and actions implemented. 3= Relationships with 25-50% of the organizations with current projects. 2= Relationships with less than 25% of stakeholders with ongoing projects. 1= There are no relationships with any of the stakeholders.	4	4	There are relationships with more than 50% of the organizations involved with current projects.
ECONOMIC – FINANCIAL AREA			
37. Long-term Financial Plan for the Protected Area (A long term financial plan assures enough resources for the optimal management of the area)			
5= There is a long term financial plan, there are funding mechanisms currently working and the income is enough to support the management. 4= There is a long term financial plan with some funding mechanisms currently working. Profits are enough but short-term. 3= There is no plan for long-term financing, there are funding mechanisms working, the income is insufficient. 2= There is no plan for long-term financing, there are some funding mechanisms, the income is insufficient. 1= There is neither a plan for long-term financing nor funding mechanisms currently operating.	3	2	
38. Availability of Generated Income (From the income generated, the area should be able to have enough of that income to ensure an optimal management).			
5= PA is able to use generated income to cover up to 100% of required investments. 4= PA is able to use generated income to cover 51-75% of required investments. 3= PA is able to use generated income to cover 26-50% of required investments. 2= PA is able to use generated income to cover up to 25% of required investments. 1= PA cannot use the collected income.	2	2	
39. Area with Identified and Valued Goods and Services			
5= The PA has identified and valued more than 75% of goods and services. 4= The PA has identified and valued 51-75% of the goods and services. 3= The PA has identified and valued 26-50% of the goods and services. 2= The PA has identified its goods and services up to 25%. 1= The PA has not identified its goods and services.	2	2	
40. Partners Recognize Services in the Protected Area			
5= >76% of the partners recognize the PA services. 4= 51-75% of the partners recognize the PA services. 3= 25-50% of the partners recognize the PA services. 2= <25% of the partners recognize the PA services. 1= Partners don't recognize the PA services.	3	3	
41. Partners Receive Direct Benefits			
5= >76% of the partners receive some kind of direct benefit. 4= 51-75% of the partners receive some kind of direct benefit. 3= 25-50% of the partners receive some kind of direct benefit. 2= <25% of the partners receive some kind of direct benefit. 1= The protected area hasn't generated any direct benefit for the partners.	4	3	Tool 3. Engagement of the stakeholders with the site.

Annex 2. Index of Legal Norms Relevant to the Management of Canaima National Park

- Constitution of the Bolivian Republic of Venezuela (G.O. 36.860 on 30 December 1999)

INTERNATIONAL AND REGIONAL AGREEMENTS

- Convention on the Protection of Flora, Fauna, and Scenic Beauty of America (G.O. 20.643 del 13-11-1941)
- Convention on the Protection of World Heritage, UNESCO (16 November 1972).
- Convention on the International Trade in Endangered Species (CITES) (G.O. 2.053 Extraordinary on 29 June 1977)
- The Convention on Wetlands of International Importance, especially as Waterfowl Habitat. "Ramsar Convention". (G.O. 34.053 on 16 September 1988)
- Convention on Biological Diversity (G.O. 4.780 Extraordinary on 12 September 1994)
- United Nations Framework on Climate Change (G.O. 4.825 Extraordinary on 27 December 1994)
- Specially Protected Areas and Wildlife Protocol (SPAW) (G.O. 36.110 on 18 December 1996)
- Decision 391 of the Andean Community "Agreement on the Access to Genetic Resources" (Official Gazette on the Cartagena Agreement No. 213 on 17 July 1996)

ACTS

- Land Use Act (G.O. 3.238 Extraordinary on 11 August 1983)
- Urban Land Use Act (G.O. 33.868 on 16 December 1987)
- Municipal Regimen Act (G.O. 4.109 on 15 June 1989)
- Public Administration Act (G.O. 37.305 on 17 October 2001)
- Tourism Act (G.O. 38.215 on 23 June 2005)

- Indigenous Peoples Act (G.O. 38.344 on 27 December 2005)
- Environment Act (G.O. 5.833 Extraordinary on 22 December 2006)

ORDINARY LAWS

- Forestry Law for Soils, Waters and Regulations (G.O. 1.004 Extraordinary on 26 January 1966)
- Law for Wildlife Protection and Regulations (G.O. 29.289 on 11 August 1970)
- Law for the Partial Reform to the INPARQUES Law (G.O. 2.290 Extraordinary on 21 July 1978)
- Environmental Punishment Law (G.O. 4.358 Extraordinary on 3 January 1992)
- Biological Diversity Law (G.O. 5.468 Extraordinary on 24 May 2000)
- Law for Demarcating and Guaranteeing Habitat and Lands of Indigenous Peoples (G.O. 37.118 on 12 January 2001)
- Solid Waste Law (G.O. 38.068 on 18 November 2004)
- Water Law (G.O. 38.595 on 2 January 2007)

DECREES/LAW

- Mining Decree on Range and Force (G.O. 5.382 Extraordinary on 28 September 1999)
- Tourism Law on Range and Force (G.O. 5.554 Extraordinary on 13 November 2001)

DECREES

- Decree No. 770, (G.O. N° 26.873 on 13 June 1962) established Canaima National Park, that area between the Carrao River to the north, Karuai and Tuaná Rivers to the east, Aparaurén River to the south, and Caroní River to the west in the Piar District, Bolívar State.

- Decree No. 1.137 (G.O. N° 30.809 on 1 October 1975) modified the boundaries of CNP in the region of the Venezuelan Guayana located in Piar and Roscio Districts, Bolívar State.
- Regulations for the Forestry Law on Soils and Waters (G.O. 2.022 Extraordinary on 28 April 1977)
- Decree No. 276 (G.O. 4.106 Extraordinary on 9 June 1989). Partial Regulation for the Land Use and National Park and Natural Monument Management Act.
- Decree No.1233 (18 January 1991) created the Tepuyan Formations Natural Monuments.
- Decree No. 1.640 (G.O. 34.758 on 18 July 1991 created the Land Use and Regulation Plan for the Eastern Sector of CNP.
- Decree No. 1.221 on 2 November 90, Regulation on Environmental Guards (G.O. 34.678 on 19-1991 [sic]).

Annex 3. Participant Directory for Project Enhancing Our Heritage, Canaima (2002-2007)..

N°	Participant	Institution	Office phone	Fax	Cell phone	e-mail
1	Abati Gilberto	Captain of Sector 2 Kamarata	0415-2120710		0414-8867388	toyumve@yahoo.com
2	Ángel Hilda	INPARQUES Central Office	0212-2732861 al 63	0212-2853070	0416-7124779	hangel@inparques.gov.ve
3	Aquino Ricardo	Orinoco Ecological Athenaeum, President	0285- 654-5169		0414-8532248	orinokoateneo@hotmail.com
4	Arnal Hugo	TNC, Venezuela				arnaltnc@telcel.net.ve
5	Ayuso Florencio	Captain in Paraitepuy			0414-9884554	
6	Azuaje Atilano	CVG-Edelca			0414-2643938, 0414-3852759	aazuaje@telcel.net.ve aazuaje@edelca.com.ve
7	Azuaje Ricardo	CEDIE, Project Coordinator	0286-9634090 / 9634091 / 9634092			ricardoazuaje@hotmail.com
8	Báez Olmania	INPARQUES - Bolívar			0414-8605689	olmaniabaez76@hotmail.com
9	Basabe Irene	Captain in Kavanayen				
10	Blanco José Agustín	CVG-Edelca	0286-9606534			joblanco@edelca.com.ve
11	Briceño Oscar	Provita, Guayana Program	0212-7942234	0212-7942556		
12	Buroz María Teresa	FUDENA, Consultant		0212-2381761		tereburoz@hotmail.com
13	Calzadilla Laura	INPARQUES - Bolívar			0416-5215503	lauralacourtt@hotmail.com
14	Cario Cesar	INPARQUES - Bolívar	0286-9662033	0286-9662032	0414-8979134 0416-6858981	cesar_cario@yahoo.com
15	Carrero Wuilliam	INPARQUES – Central Office	0212-2853592	0212-2853070		
16	Castro Darío	Captain in San Juan de Kamoirán				
17	Castro Juan José	Representative of San Juan de Kamoiran Community				
18	Castro Juan Miguel	Representative of San Juan de Kamoiran Community				

N°	Participant	Institution	Office phone	Fax	Cell phone	e-mail
19	Chacón Carlos	CEDARENA	506-2837080	506-2241426		cchacon@cedarena.org
20	Colón Esperanza	CVG-Edelca	0212-9502557/2376	0212-9502506		ecolon@edelca.com.ve
21	Contasti Mariana	E´masensen II Tourism Cooperative	0286-9634585			tukusito-1@hotmail.com, turismopemon@yahoo.com
22	Contasti Valeriano	Captain General of Sector 5 (Kavanayén)	0286-9620800			
23	Contreras Jesús Rafael	Edelca		0289-9609091	0289-9609091	jesuscontreras@telcel.net.ve
24	Courrau José	IUCN, WCPA, Consultant in Protected Areas and Tourism			506-8428977	
25	Cracco Marina	University of Queensland				mcracco@gmail.com
26	Croes Gabriela	Commission on Indigenous Affairs, MED	0212-5068900	0212-5068270		gabycroes@yahoo.com
27	Delascio Francisco	Orinoco Botanical Garden				jarboto@cantv.net
28	Delgado Jesús					jesusd@uol.com.br
29	Delgado José	INPARQUES- Morrocoy	0259-8122176	0259-8122176	0414-5561999	jdelgado@inparques.gov.ve
30	Delgado Luz	National Experimental University of Guayana (UNEG)	0286-9234786		0414-8718528	ldelgado@telcel.net.ve, ldelgado@movistar.net.ve
31	Díaz Martín Diego	VITALIS	0212-2719610 0212-2715420			ddiazmartin@vitalis.net
32	Florencio Ayuso Pérez	Paraitepuy de Roraima Community		0414-988-4554		
33	Gómez Claudio	President, Proyecto Technical Unit (UTEF)	0286-9609090/ 9091			
34	Gómez Eduardo	INPARQUES	0414-8840022	0286-9614963	0414-3451086	
35	Gómez Juvencio	Indigenous Federation of Bolívar State	0285-6321565	0285-6326786	0414-8616022	metaran@hotmail.com
36	Gómez Nicolás Betis	IFB, Ombudsman of the People	0285-6321565	0285-6326786		
37	Gómez Silvia	National Institute of Cultural Heritage	0212-4815081	0212-4829695	0416-7223961	guaricha7@hotmail.com ipc@reacciun.ve
38	González Saura	INPARQUES – Central Office	0212-2732860	0212-2853070	0414-3288445	rgonzalez@inparques.gov.ve

N°	Participant	Institution	Office phone	Fax	Cell phone	e-mail
	Carlos					
39	Guevara Arnaldo	Environment Office Bolívar State	0285-6312255, 0285-6313401	0285-6313321	0414-8549578	amgue@cantv.net
40	Heredia Luisa Elena	Regional Demarcation Commission, MARN, Bolívar	0285-6312255/ 3401/5694			
41	Herrera Olga	VITALIS			0412-3762103	olgah82@gmail.com
42	Invernón Aníbal	Ecodiversity, Conservation, and Development			0416-7988701	invernnon@cantv.net, eco-dcd@cantv.net
43	John Michael John	INPARQUES				
44	Krokfors Linda	VITALIS, Intern				
45	Lambos Fabián	Indigenous Community				
46	León Elías	INPARQUES – Bolívar	0286-9633764, 0286-9633773	0286-9603764	0416-8044734	eleon711@yahoo.es; e.leon711@gmail.com
47	León Rubén Darío	DGAI Regional Bolívar once belonged to the Ministry of Education	0212- 564-6973		0414-894-4791	
48	Lew Daniel	La Salle Natural History Museum	212- 793-8321	212-793-8321		mhnl@s@hotmail.com
49	Manrique Casilda Benti	Kanaimö Indigenous Community		0414-884-0532	0414-884-0011	
50	Marcano Raquel	Commission on Indigenous Matters of MECD	0212-5068900	0212-5068270	0416-7068357	marcanoraquel@yahoo.es
51	Marín Carmen Elena	DEA, Ministry of the Environment Bolívar	0285-6312255/ 3401/5694	0285-6313321		
52	Marín Luís Daniel	INPARQUES- Mochima	0293-4311570	0293-4311570	0414-8408828	marindls@hotmail.com
53	Márquez Miriam	Environmental Unit of the National Guard			0412-9933917	
54	Martínez Yolimar	Environment Office, Bolívar State	0285-6002140, 0285-6320082	0285-6002345, 0285-6320082	0414-8995204	yolimar_m22@hotmail.com
55	Matany Miguel	INPARQUES – Central Office			0416-6216452	

N°	Participant	Institution	Office phone	Fax	Cell phone	e-mail
56	Medina José	TNC Venezuela	0212-6138056, 5156895	0212- 2861003	0414-2774421	jmedina@tnc.org
57	Mejías Carmen	MARN - Bolívar	0285-6312255/ 3401/5694		0416-8852600	
58	Morales Marco	INPARQUES – Central Office	0212-2732861 al 63	0212-2853070	0416-6278022 0414-9104331	mmorales@inparques.gov.ve, moralesm89@hotmail.com
59	Moreno Aureliano	Indigenous Community			0414-9850454	
60	Moreno Darío	DGAI Amazonas, Division Chief	0248-521-2181		0416-338-7827	morda@cantv.net
61	Moreno José	Kamarata Indigenous Community				
62	Mundo Luís Paulino	Captain General of Sector 4 (Cuyuni),			0416-7907957	
63	Naveda Jorge	INPARQUES – Central Office	0212-2732861 al 63	0212-2853070	0416-4071400	jnaveda@inparques.gov.ve
64	Novo Isabel	VITALIS	0212-2719610 0212-2715420		0414-2775808	inovo@vitalis.net
65	Oneiber Rivas	National Guard, Environment Office	0212-4063580	0212-4063592		oneiberrivas@hotmail.com
66	Pacheco Juan de Dios	INPARQUES - Bolívar			0414-8549388	
67	Peñuela Silvana	VITALIS			0414-3239264	spenuela@cantv.net
68	Picón Gabriel	CVG-Edelca	0286-9643252		0416-1003185	hpicon@edelca.com.ve
69	Pineda Gerardo	INPARQUES- Sierra Nevada	0274-2621529	0274-2622564	0416-8739076	gpineda27@latinmail.com
70	Pizarro Italo	Indigenous Federation of Bolivar State, Ciudad Bolívar	0285-6321565		0414-1858308, 0426-9912088, 0416-1865891	itapiz@hotmail.com, itapiz@yahoo.es
71	Pozas Velásquez Jesueta Nilda	Teacher from San Rafael de Kamoiran			0414-9832282	
72	Prada Ricardo	Great Savannah Municipality	0289-9951897		0414-8922289	

N°	Participant	Institution	Office phone	Fax	Cell phone	e-mail
73	Puro Elvis	National Demarcation Commission, MARN, Caracas	0212-4081930		0414-7483417	puroelvi@hotmail.com
74	Ramírez Blanca	Proyecto Technical Unit (UTEP)			0416-8862860	
75	Ramos Boanerges	Edelca	0286-9604577			b.ramos@edelca.com.ve
76	Rangel Armando	INPARQUES – Central Office	0212-2732861 al 63	0212-2853070	0416-4317585	arangel@inparques.gov.ve
77	Rangel Jorge	INPARQUES – Bolívar				jorgerangel@cantv.net
78	Ravalo Ulin	INPARQUES – Central Office				
79	Real Mildred	VITALIS				
80	Requena Roger	Environment Office, Bolívar State			0416-5876264	requena03@gmail.com
81	Rivero Ana	Ministry of the Environment, Protected Areas Office	0212-4082151/2153	0212-4082109		arivero@marn.gov.ve
82	Rivero Erkis	VITALIS			0412-3875632	erkis73@yahoo.com
83	Rodríguez Iokiñe	Independent Consultant			0414-1725830	iokirod@telcel.net.ve
84	Romero Alexis	Indigenous Federation of Bolívar				apiway_65@hotmail.com
85	Romero C. Rowlan	Environmental Unit, National Guard, Regiment 8 - Bolívar	0286-9940942	0286-9603790		
86	Romero Francis	INPARQUES – Bolívar	0286-9226691			francisedios@hotmail.com
87	Rosales Ana Teresa	INPARQUES – Central Office	0212-2853070		0414-1236594	
88	Ruiz Susana	Viceministry of Tourism, Public Policy Office				susanaruiz@cantv.net
89	Salas Alberto	IUCN-Mesoamerica				alberto.salas@iucn.org
90	Sánchez Carlos	Captain of the National Guard Regiment 8	0286-9940942	0286-9603790	0414-8958874	carlsan@cantv.net
91	Sánchez Luz Amelia	EcoNatura				

N°	Participant	Institution	Office phone	Fax	Cell phone	e-mail
92	Sandoval Aníbal	Kamarata Indigenous Community				
93	Santaella Victoria	VITALIS			0412-3393534	visantaella@yahoo.es
94	Santeliz Kathy	Minerven				cekha@cantv.net
95	Silva Carlos Leonel	Environment Office Bolívar State			0414-8496071, 0416-2991489	silva2701@yahoo.com
96	Sobrino Marycarmen	VITALIS				mcsobrino@vitalis.net
97	Sosa Julio César	Indigenous Federation of Bolívar (IFB)	0285-6170621	0285-632-9715		pikakanwa@cantv.net
98	Stolton Sue	Equilibrium Consultants	0044-117-9428674	0044-17-428674		equilibrium@compuserve.com
99	Trocoli Alejandro	INPARQUES – Central Office	0212-2853070			trocoli@inparques.gob.ve
100	Uzcátegui Henrii	CVG-Edelca	0286-9606542	0286-9606544		
101	Uzcátegui Luís	INPARQUES – Bolívar			0414-519-0360	luisuzcategui@cantv.net
102	Valderrama Liduvina	VITALIS	0212-2719610 0212-2715420		0416-6339676	lvalderrama@vitalis.net
103	Valdez Ronny	Environment Office Bolívar State	0285-2732862, 6002174		0414-8504380	ambientegobol@yahoo.com, ronvaga@gmail.com, rvaldez@e_bolivar.gob.ve
104	Velásquez Joaquín	Captain of San Ignacio de Yuruani	0286-9633796			
105	Vizcaíno Daniela	Conservation International Venezuela		0212-2669123	0414-1089508	d.vizcaino@conservation.org
106	Williams Arnaldo	Captain of San Cruz de Mapauri				rastapemon@hotmail.com
107	Zambrano Jesús	CVG	0286-9609090/ 9091			jazp12@cantv.net

Annex 4. INPARQUES Staff Satisfaction Questionnaire

As part of the Enhancing Our Heritage Project to evaluate the management effectiveness of Canaima National Park, this questionnaire measures the satisfaction level of all staff who work in this protected area. Therefore, we look forward to your valuable and anonymous contribution as soon as you can. The confidentiality of your answers will be protected.

1.- Do you have the material and equipment necessary to carry out your job inside the park? Briefly explain.

2.- Does the infrastructure on which you work meet the minimal service requirements necessary for satisfactory performance? Explain briefly.

3.- How do you regard your work environment?

4.- Do you participate in team work?

5.- Do you enjoy the support and assistance of your immediate supervisor? Explain briefly.

6.- Have you received some kind of training during your time with the institution?

7.- Do you feel prepared to fulfill the responsibilities of your job?

8.- Are you satisfied with the activities that you carry out?

9.- Are you content with the benefits you receive (salary, insurance, etc.)?

10.- Are you content with your work status (contract or permanent employee)?

11.- Can you personally identify with the institution and thus are able to represent it?

12.- Please share any additional comment.

Thank you for your support