

Participation, conservation and livelihoods: Evaluating the effectiveness of participatory approaches in protected areas (EEPA)

## Synthesis of the Case Studies about Participation, Conservation and Livelihoods for Nine Protected Areas in Eight Latin American Countries

**Joerg Elbers**

**IUCN Regional Office for South America**

**April 2008**

**Project Coordinator:**

**Marc Hufty**

Senior researcher, IUED  
20 Rothschild, 1211 Geneva 21, Switzerland  
Tel: +4122 906 5961, Fax: +4122 906 5947  
[marc.hufty@iued.unige.ch](mailto:marc.hufty@iued.unige.ch)

**Partners:**

**Marc Hockings**

Vice-Chair Science and Management of Protected Areas, WCPA-IUCN  
University of Queensland, Gatton Campus, School of Natural and Rural Systems Management Laws  
Queensland 4343, Australia  
Tel: +617 54601140, Fax: +617 54601324  
[m.hockings@uq.edu.au](mailto:m.hockings@uq.edu.au)

**Gonzalo Oviedo**

Senior social advisor, IUCN  
28, rue Mauverney, 1196 Gland, Switzerland  
Tel: +4122 999-0287, Fax: +4122 999 0020  
[gonzalo.oviedo@iucn.org](mailto:gonzalo.oviedo@iucn.org)

**Catherine Aubertin**

Directrice de recherche, IRD-Orléans.  
Pôle Politiques de l'environnement  
Centre IRD, 5 rue du Carbonne, 45072 Orléans cedex 2, France  
Tel: +33 238499532, Fax: +33 238499534  
[Catherine.aubertin@orleans.ird.fr](mailto:Catherine.aubertin@orleans.ird.fr)

**Meriem Bouamrane**

Programme specialist  
UNESCO, Division of ecological and earth sciences  
Man and the Biosphere (MAB) Programme  
1, rue Miollis, Paris 75732, Cedex 15, France  
Tel: +33 1 45 68 40 67 ; Fax: +33 1 45 68 58 04  
[M.Bouamrane@unesco.org](mailto:M.Bouamrane@unesco.org)

## Acronyms

ADC	Asociación para el Desarrollo Campesino, Colombia
APN	Administración de Parques Nacionales, Argentina
CORACTo	Consejo Regional Ambiental del Área de Conservación Tortuguero, Costa Rica
CRTM	Consejo Regional Tsimane Mosestén, Bolivia
EEPA	Evaluating the effectiveness of participatory approaches in protected areas
EU	European Union
FFEM	Fonds français pour l'environnement mondial
GDP	Gross domestic product
GEF	Global Environment Facility
HDI	Human development index
HLC	Humedal Laguna de la Cocha, Colombia
IIRSA	Iniciativa para la Integración de la Infraestructura Regional Sudamericana
INRENA	Instituto Nacional de Recursos Naturales, Perú
IRD	Institut de recherche pour le développement
IUCN	International Union for Conservation of Nature
IUED	Institut universitaire d'études du développement
MAB	Man and the Biosphere
MINAE	Ministerio del Ambiente y Energía, Costa Rica
NGO	Non governmental organisation
OAS	Organization of American States
PAG	Parc amazonien de Guyane française
PNR	Parc naturel régional de Guyane française – Pôle ouest
PNT	Parque Nacional Tortuguero, Costa Rica
PPP	Purchasing power parity
RBCV	Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo, Brasil
RBLY	Reserva de Biosfera de las Yungas, Argentina
RBM	Reserva de Biosfera Manu, Perú
RBTIPL	Reserva de Biosfera y Territorio Indígena Pilon Lajas, Bolivia
RBV	Reserva de Biosfera Yasuní, Ecuador
SC	Supervisory council
SERNAP	Servicio Nacional de Áreas Protegidas, Bolivia
SFIC	Santuario de Flora Isla de la Corota, Colombia
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WCS	Wildlife Conservation Society
ZDUC	Zone de droits d'usage collectifs, Guyane française

## Index

	Page
Acronyms	2
1 Introduction	4
2 Description of the protected areas	6
3 Participation	11
4 Conservation	18
5 Livelihoods	22
6 Relation between participation, conservation and livelihoods	25
7 Conclusions and recommendations	27
8 References	31

## 1 Introduction

The four institutions participating in the project ‘Evaluating the effectiveness of participatory approaches’ (hereafter named EEPA), are *Institut de recherche pour le développement* (IRD), International Union for Conservation of Nature (IUCN), *Institut universitaire d’études du développement* (IUED) and UNESCO Man and the Biosphere programme (MAB). During 2007 they elaborated nine case studies testing the developed methodology in pilot protected areas. The protected areas are located in eight different Latin American countries, seven of them in South America and one in Costa Rica. Two parks are situated in French Guiana, an overseas region and department of France, located on the northern coast of South America (see table 1).

Table 1: The EEPA case studies

Protected Area	Country	Partner	Author
Parc amazonien de Guyane française	Guiana, France	IRD	Geoffroy Filoche, Catherine Aubertin
Parc naturel régional de Guyane française – Pôle ouest	Guiana, France	IRD	Geoffroy Filoche
Reserva de Biosfera Manu	Peru	IUCN	Roberto Ariano, Joerg Elbers
Santuario de Flora Isla de la Corota – Humedal Laguna de la Cocha	Colombia	IUCN	Roberto Ariano, Joerg Elbers
Reserva de Biosfera y Territorio Indígena Pilón Lajas	Bolivia	IUED	Patrick Bottazzi
Reserva de Biosfera de las Yungas	Argentina	IUED	Sandra Gagnon, Marc Hufty
Parque Nacional Tortuguero	Costa Rica	IUED	Claire Galloni d’Istria
Reserva de Biosfera Yasuní	Ecuador	IUED-MAB	Emili Utreras
Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo	Brazil	MAB	Matthieu Deldicque

Though all countries are located in Latin America, there are big social and economic differences between them, which have a strong impact on participation, conservation and livelihoods. Looking at the values in table 2 we can divide the countries into three groups. The Andean countries Bolivia, Colombia, Ecuador and Peru make up the first group, all *lower middle income countries* with medium human development. Argentina, Brazil and Costa Rica form the second group as *upper middle income countries* with a high human development. French Guiana has a special status. As an overseas department of the G8 member France it is heavily dependent on subsidies and goods from the homeland.

Table 2: General country information (UNDP 2007)

Protected Area	Country	GDP per capita (PPP US\$) 2005	World Bank category	HDI rank <sup>a</sup> 2005	Human development category	Gini index <sup>b</sup> 2005
Parc amazonien de Guyane française	Guiana, France	17.336 <sup>c</sup>				
Parc naturel régional de Guyane française – Pôle ouest						
Reserva de Biosfera Manu	Peru	6.039	Lower middle income country	87	Medium human development	52,0
Santuario de Flora Isla de la Corota – Humedal Laguna de la Cocha	Colombia	7.304	Lower middle income country	75	Medium human development	58,6
Reserva de Biosfera y Territorio Indígena Pilón Lajas	Bolivia	2.819	Lower middle income country	117	Medium human development	60,1
Reserva de Biosfera de las Yungas	Argentina	14.280	Upper middle income country	38	High human development	51,3
Parque Nacional Tortuguero	Costa Rica	10.180	Upper middle income country	48	High human development	49,8
Reserva de Biosfera Yasuní	Ecuador	4.341	Lower middle income country	89	Medium human development	53,6
Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo	Brazil	8.402	Upper middle income country	70	High human development	51,3

**NOTES**

a. Rank of 177 countries

b. A value of 0 represents absolute equality, and a value of 100 absolute inequality.

c. GDP per capita in 2006 at real exchange rates, not at PPP (Moriame & Joeger, 2007)

Although there is a big variety in economic and human development between the highest developed country, Argentina, and the least developed, Bolivia, all the countries have in common a high Gini index, which indicates a high inequality in the distribution of income inside the countries.

## 2 Description of the protected areas

The nine protected areas under study have different legal status and conservation categories (see table 3). The two parks in French Guiana correspond to the French national park system: *Parc amazonien de Guyane française* as a French National Park and *Parc naturel régional de Guyane française – Pôle ouest* as a French Regional Park. *Parque Nacional Tortuguero* is a Costa Rican National Park. The field study of Colombia combines a Colombian Protected Area, *Santuario de Flora Isla de la Corota*, and a Ramsar<sup>1</sup> site, *Humedal Laguna de la Cocha*. The remaining five sites all form part of the international network of biosphere reserves within UNESCO's Man and the Biosphere programme (Lockwood 2007, Rosas & Clusener-Godt 2007).

Biosphere reserves are defined as "areas of terrestrial and coastal/marine ecosystems or a combination thereof, which are internationally recognized within the framework of UNESCO's programme on Man and the Biosphere (MAB)" (UNESCO 1996). Biosphere reserves should strive to be sites of excellence to explore and demonstrate approaches to conservation and sustainable development on a regional scale in combining three functions (Persic et al. 2008):

- conservation: contribute to the conservation of landscapes, ecosystems, species and genes;
- development: foster economic and human development which is socio-culturally and ecologically sustainable;
- research and monitoring in a world network: support for demonstration projects, environmental education and training, research and monitoring related to local, regional, national and global issues of conservation and sustainable development.

To fulfil their functions, biosphere reserves should have an appropriate zoning that recognizes the following areas (UNESCO 1996):

- a legally constituted core area or areas devoted to long-term protection, according to the conservation objectives of the biosphere reserve, and of sufficient size to meet these objectives;
- a buffer zone or zones clearly identified and surrounding or contiguous to the core area or areas, where only activities compatible with the conservation objectives can take place;
- an outer transition area where sustainable resource management practices are promoted and developed.

The examined biosphere reserves simultaneously encompass areas under national protected areas systems, e.g. Ecuadorian National Park Yasuní is the core area of *Reserva de Biosfera Yasuní*, and other internationally recognised sites, e.g. Peruvian National Park and World Heritage site Manu is the core area of *Reserva de Biosfera Manu*.

---

<sup>1</sup> The Ramsar Convention is an international treaty for the conservation and sustainable utilisation of wetlands (Ramsar Convention Secretariat 2006).

Table 3: General information about the protected areas

Protected Area	Country	Natural region	Conservation category	IUCN category	Foundation	Size ha	Inhabitants	Population density Inh. <sup>a</sup> /km <sup>2</sup>
Parc amazonien de Guyane française	Guiana, France	Guiana shield	French National Park	II	27.02.2007	3.400.000	7.000	0,2
Parc naturel régional de Guyane française – Pôle ouest	Guiana, France	Atlantic coastal lowlands	French Regional Park	V	26.03.2001	125.000	6.300	5,0
Reserva de Biosfera Manu <sup>b</sup>	Peru	Amazon basin, eastern slope of the tropical Andes	MAB Biosphere Reserve	II <sup>c</sup>	1977	1.881.200	13.000	0,7
Santuario de Flora Isla de la Corota <sup>x</sup> – Humedal Laguna de la Cocha <sup>+</sup>	Colombia	Eastern slope of the tropical Andes	Colombian Protected Area <sup>x</sup> – Ramsar site <sup>+</sup>	III <sup>x</sup> VI <sup>+</sup>	1977 <sup>x</sup> 2000 <sup>+</sup>	16 <sup>x</sup> 39.000 <sup>+</sup>	0 <sup>x</sup> 5.700 <sup>+</sup>	0 <sup>x</sup> 14,6 <sup>+</sup>
Reserva de Biosfera y Territorio Indígena Pílon Lajas <sup>d</sup>	Bolivia	Eastern slope of the tropical Andes, Amazon basin	MAB Biosphere Reserve	VI	1977 <sup>e</sup> , 09.04.1992 <sup>f</sup>	400.000	9.600	2,4
Reserva de Biosfera de las Yungas <sup>g</sup>	Argentina	Eastern slope of the subtropical Andes	MAB Biosphere Reserve	II <sup>c</sup>	07.11.2002	1.328.720	33.700	2,5
Parque Nacional Tortuguero	Costa Rica	Caribbean coastal lowlands	Costa Rican National Park	II	03.11.1975	80.574 (34.819 terrestrial, 45.755 maritime)	1.000	2,9 <sup>h</sup>
Reserva de Biosfera Yasuní <sup>i</sup>	Ecuador	Amazon basin	MAB Biosphere Reserve	II <sup>c</sup>	25.05.1989	1.682.000	9.800	0,6
Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo <sup>j</sup>	Brazil	Atlantic coastal mountains and lowlands	MAB Biosphere Reserve	Ia <sup>c</sup> , II <sup>c</sup>	09.07.1994	1.540.000	23.000.000	1.493,5

**NOTES**

- a. Inhabitants  
b. [www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=PER+02&mode=all](http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=PER+02&mode=all)  
c. In the core area of the biosphere reserve  
d. [www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=BOL+01&mode=all](http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=BOL+01&mode=all)  
e. Designation of UNESCO MAB *Reserva de Biosfera Pílon Lajas*  
f. Bolivian supreme decree that creates *Reserva de Biosfera y Territorio Indígena Pílon Lajas*  
g. [www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=ARG+11&mode=all](http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=ARG+11&mode=all)  
h. Population density related to the terrestrial area of the park  
i. [www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=ECU+02&mode=all](http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=ECU+02&mode=all)  
j. [www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=BRA+01&mode=all](http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=BRA+01&mode=all)

The IUCN protected area management categories (Bishop et al. 2004) of the sites correspond to the national conservation categories. The two national parks, PAG in French Guiana, PNT in Costa Rica are classified as IUCN category II: national park (MINAE 2006). The Colombian protected area *Santuario de Flora Isla de la Corota* belongs to category III, natural monument, and the surrounding Ramsar site *Humedal Laguna de la Cocha* belongs to the IUCN category VI: managed resource protected area (Andrade 2007). The regional park of French Guiana, PNR, is classified as IUCN category V: protected landscape/seascape. The four large biosphere reserves (see table 3) have core areas that correspond to IUCN category II. In addition, *Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo* in Brazil encloses biological reserves and ecological stations corresponding to IUCN category Ia: strict nature reserve/wilderness area (Burkart et al. 2007, Comisión de Áreas Protegidas de Perú 2007, Gonçalves 2007, Ulloa et al. 2007). *Reserva de Biosfera y Territorio Indígena Pilón Lajas* is categorised by the Bolivian National Park System as a Natural Area of Integrated Management<sup>2</sup> and classified as IUCN category VI (SERNAP 2007).

The size of the parks varies between 39.000 and 3,4 million hectares. *Parc amazonien de Guyane française*, the biggest park, has a surface larger than Belgium. Four of the five biosphere reserves are also very large, with sizes between 1,3 and 1,9 million hectares, only *Reserva de Biosfera y Territorio Indígena Pilón Lajas* is distinctly smaller with 400.000 hectares. The four large biosphere reserves have an appropriate zonation with a core area, a buffer zone and a transition area, RBTIPL does not have any of the above-mentioned areas. The three remaining parks have a much smaller size between 125.000 and 39.000 ha.

The biggest park, PAG, has the lowest population density with 0,2 inhabitants per km<sup>2</sup>. Four of the five biosphere reserves also have very low population densities between 0,6 and 2,5 inhabitants per km<sup>2</sup>. *Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo* forms a big exception in this study. It includes the metropolitan area of Sao Paulo, with 20,3 million inhabitants the largest urban agglomeration in South America, leading to an enormous population density of nearly 1.500 inhabitants per km<sup>2</sup> for this protected area. The population density of the remaining parks lie between 14,6 inhabitants per km<sup>2</sup> in HLC and 2,9 in PNT.

---

<sup>2</sup> Área Natural de Manejo Integrado (ANMI)



As follows, a short description of the actors living in or relevant to the protected areas is presented in the same order as listed in the tables:

The case study about *Parc amazonien de Guyane française* concentrates on the Amerindian ethnic group of Teko who live in the rural commune of Camopi. The rural commune is ethnically mixed: 250 Teko live together with 650 Wayãpi, another Amerindian ethnic group. The actors that intervene in the supervisory council of PAG can be classified into four categories: territorial communities (*collectivités territoriales*), Amerindian and Bushinenge<sup>3</sup> ethnical local communities (*communautés locales*), competent national and local personalities and governmental representatives.

The second French Guianan case study about *Parc naturel régional de Guyane française – Pôle ouest* focuses on the rural commune d'Awala-Yalimapo, which is inhabited by the Amerindian ethnic group Kali'na. D'Awala-Yalimapo is one of four rural communes that form the PNR. Beneath governmental representatives, the actors involved in the park management represent different levels of territorial communities (*collectivités territoriales*): Regional Council, General Council, the four rural communes and the West Guianan Community of the Communes<sup>4</sup>.

In the Peruvian *Reserva de Biosfera Manu* live various native communities of contacted indigenous peoples and indigenous peoples in voluntary isolation spread over the core and transition area of the park. The main population group of the transition area form Quechua colonisers coming from the Andean region. The Quechua colonisers and peasants maintain the cultural values and communal organisation they brought from the Andes to the Amazon colonisation zone. Due to their number, strong organisation structures and complete integration into the market economy, they determine local and regional politics, leaving a marginalized role for the indigenous peoples of RBM.

The non governmental actors of Colombian Protected Area and Ramsar site *Santuario de Flora Isla de la Corota – Humedal Laguna de la Cocha* are *campesinos* (peasants and colonisers) and indigenous peoples from the Inga, Kamentsá and Quillasingas communities who form a fifth of local population. The *campesinos* have organized different associations to represent them while the indigenous peoples count with there formal representatives. Some organisations even include both.

The case study about the stakeholders in the zone of influence of the Bolivian protected area *Reserva de Biosfera y Territorio Indígena Pilón Lajas* concentrates on the autochthonous

---

<sup>3</sup> Descendants of black slaves escaped in the 18<sup>th</sup> century

<sup>4</sup> Communauté des communes de l'Ouest Guyanais (CCOG)

and migrant populations; the local mestizo population Camba is not the focus of attention of this analysis. Autochthonous indigenous peoples from the Tsimane, Tacana and Masetén communities account for 15% of the local population, whereas Andean colonists form the majority in the bordering colonisation zone. Furthermore, the colonists are mostly indigenous peoples – Aymara and Quechua from the Bolivian altiplano. The settling of the colonisation zone Yucumo-Rurrenabaque at the northeastern border of RBTIPL started in 1978. The Aymara and Quechua are characterised by a potent feeling of ethnic identity, reflected in a very strong syndicate tradition. Their powerful organisation structures and political capacity distinguish them very much from the Amazonian indigenous peoples.

The case study about *Reserva de Biosfera de las Yungas* in Argentina identifies two types of actors, according to the analytical frame of governance (Hufty 2007): organisations as collective actors and persons as individual actors. Important collective actors are federal and provincial administrations (the provinces of Salta and Jujuy, the Argentinean National Parks Administration<sup>5</sup>), universities (Salta, Buenos Aires and Tucumán), NGOs (Fundación ProYungas, Greenpeace Argentina, Fundación Vida Silvestre Argentina, Yaguareté), private enterprises (Tabacal, Ledesma), autochthonous communitarian associations (Tinkunaku, Comunidad de San Andrés) and external actors (MAB South America, WCS, FFEM, GEF, OAS, UNDP, UNEP). Some of the individual actors also are key players in the governance processes of RBLY but the case study focuses on the collective actors.

The actors of *Parque Nacional Tortuguero* in Costa Rica are classified into three: local population, governmental authorities and NGOs. Most of the locals live in the Barra de Tortuguero village at the northern park entrance; other communities lie along the Tortuguero channel. The traditional Afro Caribbean population experienced vehement changes during the last decades. First, the creation of the national park shifted the regime of common property at the Tortuguero site into a regime of state-owned property, and since the nineties, the park has witnessed a strong increase of tourism. The traditional Afro Caribbean population is more and more marginalized. Tourism managed by white Costa Ricans from the interior has led to migration, mainly women from Nicaragua and Colombia, working in the tourist trade. There are also Costa Rican migrants, but none from the Caribbean coast. The only governmental representatives in the village are the national park administration officials, MINAE Tortuguero. One important NGO has an office in the village, the Caribbean Conservation Corporation. Since 1959, they have worked in the area on marine turtle conservation and played an important role in the creation of the national park.

---

<sup>5</sup> Administración de Parques Nacionales (APN)

The actors of Ecuadorian *Reserva de Biosfera Yasuní* are mainly indigenous peoples. The Tagaeri-Taromenane are isolated indigenous peoples without any type of formal representation. The Waorani, who have been related to exogenous stakeholders, e.g. loggers and oil companies since the nineteen fifties, are formally represented by the Waorani Nationality of Ecuador<sup>6</sup>, the organisation of their indigenous nationality. Another group, the Quichuas, have migrated to the Amazon basin in different colonisation waves; their representation is a federation of the Quichua indigenous communities in the province of Orellana<sup>7</sup>. Other settlers, from small villages of neighbor provinces, arrived as colonists during the seventies to the Ecuadorian Amazon when formal governmental policies encouraged individual efforts; they are represented by a peasant federation for the province of Orellana<sup>8</sup>.

The huge *Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo* in Brazil encompasses not only twelve protected areas but also the largest urban agglomeration in South America. The supervisory council of RBCV includes governmental and non governmental actors. Among the latter are inhabitants, representatives from primary, secondary and tertiary sector, NGOs and river basin representatives. The per capita green space available in the metropolitan area of São Paulo is so small that the actors face a big challenge.

### 3 Participation

Most of the investigated protected areas have a supervisory council as maximum level of participation to support management and administration of the site. In table 4, you can find some general information about the supervisory systems. The division of council members into governmental and non-governmental allows for a simplified first impression. Detailed descriptions about the classification of council members can be found in the case studies and throughout this chapter. The level of participation in the protected areas, according to grid 2 of the EEPA methodology, is described area for area and summarized in table 5.

---

<sup>6</sup> Nacionalidad Waorani del Ecuador (NAWE)

<sup>7</sup> Federación de Comunas, Unión de Nativos de la Amazonía Ecuatoriana (FECUNAE), which includes 120 communities

<sup>8</sup> Federación de Organizaciones Campesinas de la Amazonía (FOCAO), which has 413 active members

Table 4: Supervisory systems of the protected areas

Protected Area	Country	Supervisory system	Foundation	Council members		
				$\Sigma$	gov <sup>a</sup>	non gov <sup>a</sup>
Parc amazonien de Guyane française	Guiana, France	Supervisory council	2007	44	10	34
Parc naturel régional de Guyane française – Pôle ouest	Guiana, France	Syndicate committee		15	0	15
Reserva de Biosfera Manu	Peru	Supervisory council	2005	99	20	79
		Executive commission		19	9 <sup>b</sup>	10 <sup>b</sup>
Santuario de Flora Isla de la Corota – Humedal Laguna de la Cocha	Colombia	<i>Minga</i> <sup>c</sup>	1980 <sup>d</sup>	550 families		
Reserva de Biosfera y Territorio Indígena Pilón Lajas	Bolivia	Supervisory council	1997, restored 2002 <sup>e</sup>			
		Indigenous council CRTM	1992	51	1	50
Reserva de Biosfera de las Yungas	Argentina	Supervisory council	2000 <sup>f</sup>			
Parque Nacional Tortuguero	Costa Rica	General assembly of CORACTo <sup>g</sup>	1998			
		Executive committee of CORACTo <sup>g</sup>		7 <sup>h</sup>		
Reserva de Biosfera Yasuní	Ecuador	Supervisory council	2001	7	2	5
Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo	Brazil	Supervisory council	2002	34	17	17

**NOTES**

- a. governmental
- b. Distribution in August 2007: the head of the Manu National Park has a statutory seat in the Executive commission, the other members are elected from the Supervisory council.
- c. *Minga* (Quechua): ancient tradition of communitarian or collective work with the aim of social utility
- d. Foundation of ADC (Asociación para el Desarrollo Campesino)
- e. SERNAP 2007
- f. Council formed at the beginning of the process to establish the RBLY two years before the foundation of the park
- g. The supervisory system is an environmental regional council; it belongs not only to PNT, but consists of three protected areas in Tortuguero Conservation Area.
- h. The General Assembly elects six members, the remaining member is the Director of Tortuguero Conservation Area who assumes the Executive Secretary.

The following is a short description of the best practices and lessons learned about participation in the inspected parks according to the order of the tables:

According to the 1960 French law, the government (*État central*) prohibited every human action in French national parks and had the exclusive task of their management. The legislative reform of the national parks in 2006 introduced new concepts of sustainable development into park management, including participation of the local population. Based on this new law, in 2007 the *Parc amazonien de Guyane française* was established. A supervisory council assures the park management that local actors have a reinforced

representation. The "local" has a special connotation in French Guiana: it comprises territorial communities (*collectivités territoriales*) emerged from the decentralisation, and Amerindian and Bushinenge ethnical local communities (*communautés locales*) which allocate the customary authorities. The territorial communities have twelve representatives in the SC, while the local communities have only five. In spite of these limitations, the *official* recognition of Amerindian and Bushinenge authorities is a novelty. After a long time of coexistence, the administration now accepts the authorities of common right, the mayors of the communities, and the customary authorities. The establishment of the park with its management organs paradoxically could imply a loss of authority of the local populations due to their little integration in the SC. On the other hand, in all the Amazonian states, the integration of customary rights into the management plans of protected areas could be a masterpiece of conservation politics. The level of participation in PAG has been categorised between functional and interactive, depending much on the circumstances of the particular situation.

The French regional parks are distinguished by different factors from other types of protected areas. The most important ones for this study are first the *initiative*, which is carried out by the local actors and not by the state, and the *elaboration of the territorial project*, which is established by the most extensive coordination of all involved actors. The agreement between the territorial communities (*collectivités territoriales*) and the other partners of *Parc naturel régional de Guyane française – Pôle ouest* has taken shape in the form of a contract: the charter. The charter is approved by the state and it comprises a report that explains the territorial project for ten years and a plan of the park. A Mixed Syndicate manages PNR and integrates the different levels of territorial communities. The role of the state is limited to the classification of the park, control and a technical partnership. The Amerindian local communities (*communautés locales*), which assign the customary authorities, do not have any recognised and formalised authority. However, the rural commune d'Awala-Yalimapo is inhabited almost solely by the Amerindian Kali'na, i.e. the Kali'na put the authorities of common rights and also the customary authorities. Inside the mayor's office, there is a mixed commission commune/local communities, an extraordinary institution for French Guiana. The mayor of the commune and the two customary chiefs are legitimate members of the mixed commission. The Syndicate Committee administrates the Mixed Syndicate of PNR; the rural commune d'Awala-Yalimapo holds two of 15 seats in the committee. The Kali'na have an ambivalent apprehension of PNR. By one hand they suffer a lack of participation. The Creoles form the majority and the Kali'na feel that the Creoles do not understand their problems. On the other hand, PNR assists the rural commune to fund and execute development projects. The level of participation in PNR has the categories between consultative – the indigenous communities have no formal voting capacity – and functional –

the Kali'na can influence the agenda of PNR by means of the two representatives from their territorial community.

Peruvian National Park and *Reserva de Biosfera Manu* has a supervisory council comprised of 99 representatives from regional and local governments, civil and productive associations, peasant and indigenous communities, NGOs and tour operators. The SC elects a 19 member executive commission as its executive body. The achievements presented by the SC refer to fundraising, support to management instruments and the management of the park. A main challenge to reach real participation in the SC is capacity building for local actors. Equity in the participatory process requires a homogenous repartition of knowledge, qualifications and skills. Currently there are big differences between INRENA, the local and regional governments, other involved actors and the peasant and indigenous communities. An example for the limited capacity of the SC is the annual work plan for 2007; it looks like a "shopping list" with desires and proposals, many of them outside of the statutory legislation of the SC. Other factors that restrict good governance in RBM are lack of accounting and transparency, absence of social control and lack of financial sustainability of the SC. According to the enumerated criteria, level of participation in RBM received the category passive/consultative.

The history of Colombian Protected Area and Ramsar site *Santuario de Flora Isla de la Corota – Humedal Laguna de la Cocha* shows a particular participation process. In 1980, three years after declaring *Isla de la Corota* a national protected area, *campesinos* and indigenous peoples living at the shores of *Laguna de la Cocha* founded the Association for Peasant Development, ADC, to struggle against natural, economic and socio cultural decline. The form of social organisation of the local actors is the *minga* (De la Torre & Sandoval 2004). The Quechuan word *minga* stands for an ancient tradition of communitarian or collective work with the aim of social utility; it is a pre-Columbian system of Andean societies. The *minga* owns horizontal decision structures without hierarchies, but levels of coordination, action and collaboration, in the practice of solidarity. The farms of the ADC members are natural reserves and private conservation areas. Five hundred and fifty families are engaged in the conservation and protection of the region. In the nineties, a big development project threatened the ecological integrity: it intended to drain water from La Cocha to the department capital Pasto. ADC responded to this threat by requesting that La Cocha be included in the international Ramsar Convention. In 2000, ADC obtained the declaration of *Humedal Laguna de la Cocha* as a Ramsar site, a brilliant example of political incidence for a local *campesino* association from a local to international level. Consequently, the level of participation of HLC can be classified as self-mobilisation. In addition, the level of participation of *Santuario de Flora Isla de la Corota* receives the category functional: the

SFIC working team is comprised of local personal and the head of the park has continuity of their position.

In 1977 the UNESCO Man and Biosphere Programme declared the Bolivian protected area Pilón Lajas as a biosphere reserve. This declaration had no implications at all on the ground until 1992. This year the Bolivian President created the *Reserva de Biosfera y Territorio Indígena Pilón Lajas*, establishing a reserve of double statute, on one hand a biosphere reserve, and on the other an indigenous territory<sup>9</sup>. This double statute led to two different entities for the same area that sometimes coordinate but often do not. The council of the autochthonous population, the Regional Council Tsimane Mosestén (CRTM), has the principal task to guarantee the territorial regulation to obtain the definitive land title for RBTIPL. The representatives of the state – municipalities, prefectures and park authority – dominate the supervisory council of the biosphere reserve that, by law, should be made up of a 50% autochthonous population. The participation of the autochthonous population in the SC is very weak due to their lack of negotiation capacity, logistical problems to move to the council meetings and lack of funding. The autochthonous population does not recognize the SC as a nodal point and the CRTM often boycotted participation in the SC. On the other hand, the colonists on the northeastern border do not give any legitimacy to the biosphere reserve and do not respect its statute. According to the enumerated criteria, level of participation in RBTIPL was given the classification of self-mobilisation but conflictive.

In the year 2000, at the beginning of the process to establish the *Reserva de Biosfera de las Yungas* in Argentina, a supervisory council began to function. In 2002, this council presented a technical project to install the biosphere reserve. The project development was a top down, vertical process guided by the provincial administration of Salta with the help of an expert group – imposed from the “authorities” to the local population. Due to this procedure, the biosphere reserve concept remained abstract for the majority of the actors. With the foundation of RBLY in 2002, three zonal committees (*comités zonales*) have been put in place, today four exist. Their function is to support the biosphere reserve on the local level: the locals have the chance to discuss and to express their demands. The functioning of the SC and the zonal committees from 2002 to 2007 was unbalanced and sometimes chaotic, and the SC never functioned in an optimum manner. Until today, the SC has not finished the management plan of the reserve. A big confusion reigns about different projects in the region, the roles of different actors and fundings. This confusion leads to conflicts that have a negative influence on the work of the SC. In the Upper Bermejo valley exists a huge bi-

---

<sup>9</sup> Since 1996, the indigenous territories in Bolivia have the official status of Communitarian Land of Origin (*Tierra Comunitaria de Origen*, TCO)

national development programme<sup>10</sup>, whereas RBLY itself remains practically without funding. The zonal committees have different problems: conflicts inside the communities and of representation but also funding problems. In addition, the SC confronts various difficulties: for APN the political will of the provinces is insufficient, the provinces ask for a greater participation in decision-making, and the autochthonous communities lament the absence of autochthonous participation inside RBLY. Every actor participating in the management does it for reasons not necessarily linked to the objectives of the site: fight for land titles, political recognition, increase of state control over the park, increase of power and control over the territory, etc. The level of participation in RBLY receives the classification between consultative and functional – depending on the point of view of different actors and the particular moment of observation.

The restrictive national park system of Costa Rica is based on the Yellowstone model which gradually makes way for an inclusive, participative model of park management. In the case of *Parque Nacional Tortuguero*, the actors are well disposed toward participation, combining conservation and development. Meanwhile, the resources gained by the park are flowing exclusively into the Costa Rican Environmental and Energy Ministry MINAE, which creates tensions and conflicts on the spot. The supervisory system CORACTo is an environmental regional council. It belongs not only to PNT, but consists of three sites in Tortuguero Conservation Area. The seat of the CORACTo organs (see table 4) is in Guapiles, four and a half hours away from the park. In the Executive Committee only MINAE Tortuguero is present from PNT. In 2004, in the framework of a big EU project, the management plan of PNT designed as a co management tool, was developed. This alleged participatory process was a top-down compilation determined by the powerful stakeholders from EU and MINAE. The level of participation was passive and local actors had the clear impression that the people in charge of the elaboration of the plan never considered their opinion. Until 2007, nobody put in practice the part of the management plan that concerns participation. Due to the outlined situation, the level of participation for PNT is in the passive category.

The Ecuadorian *Reserva de Biosfera Yasuní* is the scenario of a permanent tension between two meta norms<sup>11</sup> around which participation has gravitated. The seven member supervisory council and its technical advisory group have not accomplished much; the new paradigm has not reigned. The integration of the indigenous peoples into the participation paradigm has not

---

<sup>10</sup> PEA (*Programa Estratégico de Acción para la Cuenca Binacional del Río Bermejo*), a nearly 20 million dollar GEF programme executed between 2001 and 2007

<sup>11</sup> Meta-norms refer to the principles that orient the social contract and that define the shared values. The meta-norms in consideration are: sustainable development linked to biodiversity conservation, and the techno-industrial capitalist productivity.



been successful, especially if we consider the non-Quichuas ethnic groups. Even with the Quichuas, to sign agreements and to support eco tourism and small productive projects is not enough. Arrangements regarding the access and use of natural resources as well as the making of environmental policies have to be done. The relation between the external actors that promote participation and the indigenous peoples is asymmetric: the levels of welfare and education, as well as the philosophy of life, set up different mind frames regarding the extent of the conservation needs. The participatory rationale creates increasing necessities, which can only be supplied with currency among people who not long ago lived only from what the jungle offered. According to the enumerated criteria, level of participation in RBY receives the category passive/consultative.

For the case of *Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo* in Brazil, participation involves three different levels: an apprenticeship process that leads to the action plan for the biosphere reserve; a result of a project that involves a territory, a sector, or a resource; and, finally through the participation and execution of this projects. The association of different levels of participation during the dialogue periods enables an interactive participation. The supervisory council of RBCV includes 17 governmental and 17 non-governmental delegates. The dialogue among actors has always been the starting point for any kind of initiative because the supervisory council forms a link for institutions, private sector, NGOs, scientists and citizens. Perhaps two local delegates cannot represent the interest of 23 million people in the supervisory council, but the youth programme in the RBCV involves many people (see chapter 5). The 73 municipalities have an important representation: they hold eight of 34 seats in the council. The council represents the seven regions created as management units, as well as the São Paulo state and the federal state, even though the latter has hardly ever shown up. In the future, the council must include a relevant stakeholder currently excluded: agricultural families. Due to the analysis, the level of participation for RBCV received the interactive classification.

A colour code in table 5 labels the level of participation in the protected areas according to grid 2 of the EEPA methodology. The lowest levels of participation – passive and consultative – are marked red, an intermediate level of participation – functional – yellow, while green denotes interactive and self-mobilisation participation as upper scale levels.

Table 5: Level of participation in the protected areas

Protected Area	Country	Supervisory organ	Level of participation
Parc amazonien de Guyane française	Guiana, France	Supervisory council	Functional/interactive
Parc naturel régional de Guyane française – Pôle ouest	Guiana, France	Syndicate committee	Consultative/functional
Reserva de Biosfera Manu	Peru	Supervisory council with executive commission	Passive/consultative
Santuario de Flora Isla de la Corota <sup>x</sup> – Humedal Laguna de la Cocha <sup>+</sup>	Colombia	<i>Minga</i>	Functional <sup>x</sup> Self-mobilisation <sup>+</sup>
Reserva de Biosfera y Territorio Indígena Pilón Lajas	Bolivia	Supervisory council and Indigenous council	Self-mobilisation but conflictive (or interactive)
Reserva de Biosfera de las Yungas	Argentina	Supervisory council	Consultative/functional
Parque Nacional Tortuguero	Costa Rica	Environmental regional council with executive commission	Passive
Reserva de Biosfera Yasuní	Ecuador	Supervisory council	Passive/consultative
Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo	Brazil	Supervisory council	Interactive

Even though the stakeholders incorporated many of the "practices to observe" from grid 2 of the EEPA methodology into the decision-making process, most cases reflect an intermediate level of participation heavily biased to the lower end of the scale. The Brazilian RBCV and the French Guianan PAG are on the upper scale, as well as the remarkable examples of self-mobilisation of Bolivian RBTIPL and Colombian HLC.

The supervisory council has been the main vehicle to enable participation in these protected areas. The participation levels of the supervisory councils widely range from passive to self-mobilisation. On the other hand, the alternative supervisory systems have proven to be still at low but increasing levels. The case of PNR is interesting because of the local initiative in the elaboration of a territorial project, despite other problems.

## 4 Conservation

Table 6 shows the conservation issues, threats and weaknesses to conservation the protected areas are facing. Threats are arranged from more to less important.

Noteworthy are the importance of logging as a threat in most protected areas and the uniqueness of the threats that RBCV faces. The three protected areas situated on the eastern slope of the tropical Andes and in the Amazon include great biodiversity and face a similar situation: highland peoples with their rationale moving downward to the Amazon basin, displacing locals and endangering their livelihoods. Logging, illegal hunting, and

Table 6: Conservation issues, threats and weaknesses to conservation in the protected areas

Protected Area	Country	Natural region	Conservation issues <sup>a</sup>	Threats	Weaknesses
Parc amazonien de Guyane française	Guiana, France	Guiana shield	Tropical evergreen lowland rain forest, high biodiversity	Illegal gold washing causing environmental pollution	
Parc naturel régional de Guyane française – Pôle ouest	Guiana, France	Atlantic coastal lowlands	Mangrove forest, tropical evergreen swamp forest with palms, tropical swamp, sea turtles, high biodiversity	Logging, hunting, population growth	
Reserva de Biosfera Manu	Peru	Amazon basin, eastern slope of the tropical Andes, Andean highlands	Tropical evergreen lowland and mountain rain forest, high Andean dry grasslands ( <i>puna</i> ), high biodiversity, indigenous peoples in voluntary isolation	Logging, hunting, agricultural colonisation, tourism and investigation impacts, trans-continental infrastructure projects <sup>b</sup>	Low budget of park administration, insufficient number of rangers and technical staff
Santuario de Flora Isla de la Corota <sup>x</sup> – Humedal Laguna de la Cocha <sup>+</sup>	Colombia	Andean highlands, eastern slope of the tropical Andes	High Andean wetlands and humid grasslands ( <i>páramos</i> ), tropical evergreen mountain rain forest, high biodiversity, sacred natural site	Tourism <sup>x</sup> – Logging and charcoal production, sedentary agriculture, cattle raising, hunting, water pollution, trans-continental infrastructure projects <sup>b</sup> <sup>+</sup>	Low budget of park administration <sup>x</sup> – Difficulties to implement the Ramsar site management plan <sup>+</sup>
Reserva de Biosfera y Territorio Indígena Pilón Lajas	Bolivia	Eastern slope of the tropical Andes, Amazon basin	Tropical evergreen mountain and lowland rain forest, high biodiversity	Logging, hunting, agricultural colonisation	Low budget of park administration, insufficient number of rangers and technical staff
Reserva de Biosfera de las Yungas	Argentina	Eastern slope of the subtropical Andes	Subtropical partly evergreen mountain rain forest, high Andean dry grasslands ( <i>puna</i> ), high biodiversity	Logging, oil and gas exploitation and pipelines, trans-continental infrastructure projects <sup>b</sup>	Low budget of park administration
Parque Nacional Tortuguero	Costa Rica	Caribbean coastal lowlands	Sea turtles, tropical evergreen lowland rain forest, tropical swamp, high terrestrial and marine biodiversity	Poaching, pollution through pesticides and sewage, drug trafficking, tourism, logging	Low budget of park administration, insufficient number of rangers and technical staff
Reserva de Biosfera Yasuní	Ecuador	Amazon basin	Tropical evergreen lowland rain forest, high biodiversity, indigenous peoples in voluntary isolation	Oil and gas exploitation and pipelines, logging, hunting, agricultural colonisation, illegal commerce with threatened animals	Low budget of park administration, insufficient number of rangers and technical staff
Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo	Brazil	Atlantic coastal mountains and lowlands	Mangrove forest, dune vegetation, tropical evergreen mountain rain forest ( <i>mata atlântica</i> ), environmental services, high biodiversity	Urban expansion, infrastructure projects, disposition of industrial pollutants	Low budget of park administration

**NOTES**

a. for the classification of vegetation compare Seibert 1996

b. of the IIRSA initiative

GIAN Project – Conservation and livelihoods: Assessing participatory approaches to protected areas management

agricultural colonisation are threats that subsist because these protected areas share a common problem: low budgets that imply insufficient number of rangers and technical staff. This weakness is a common issue for most of the parks under study and for most of the protected areas in Latin America (Guerrero et al. 2007, Rivas 2006, UICN 2008).

The infrastructure projects that pose as a menace for the Colombian, Peruvian and Argentinean protected areas relate to the South American regional integration initiative IIRSA. The initiative has the objective to promote the development of transport, energy and telecommunications infrastructure for the continent. IIRSA defined ten integration axes of roads and waterways to connect the Pacific and the Atlantic Ocean (Dijck & Haak 2007, Grupo Semillas & ILSA 2007).

Ecuador's RBY and Peru's RBM share a special "conservation" issue. Both parks provide space for indigenous peoples in voluntary isolation. All the stakeholders bringing western civilisation to the core areas of these parks threaten the survival of the last indigenous communities in voluntary isolation (Cabodevilla 2004).

Protection of tropical humid forest as in Ecuador and Guiana face different threats but they share a common one: the exploitation of mineral resources. There is also an important interest in conservation of coastal lowlands and the mitigation of the current threats, as demonstrated in the Brazilian, Costa Rican and Guianan protected areas.

In the PAG, the main concern of the Amerindian ethnic group Teko is to eradicate the illegal gold washing that causes environmental pollution in the park. Most gold prospectors are illegal Brazilian immigrants causing problems to public health and security.

As part of the empowerment process, the Association for Peasant Development in La Cocha introduced *research mingas* (*mingas investigativas*): communitarian work and meetings to investigate nature and ecological processes in the area. As a result of the *research mingas*, the members of ADC established the Network of La Cocha Natural Reserves<sup>12</sup> at the beginning of the nineties. Today 52 families are involved in this network of 54 private protected areas conserving 3.500 ha of cloud forest, *páramos* and wetlands, including biodiversity. The protection, regeneration and reforestation of native forests combined with agro ecological agriculture improved the situation of soils, water, flora and fauna in the area. Integration of conservation and production increased quantity and quality of consumed food, and consequently the food security.

Andean colonists have a split relation to conservation in the buffer zone of RBTIPL. On the one hand they manage the conservation discourse, changing the designation of their

---

<sup>12</sup> Red de Reservas Naturales de La Cocha

federation from "colonists" to "agro ecological producers"<sup>13</sup>, on the other hand they present conservation often as an exogenous value, imposed by the *Q'ara*, a pejorative Aymara expression for mestizos and whites. Conservation is a secondary interest compared to the livelihoods of the colonists – livelihoods in the sense of clearing rain forest for sedentary agriculture.

The incident of Sauzalito shows that the establishment of RBLY changed the balance of power and the eco-political dynamic in this northwestern Argentinean region. In 2002, the enterprise Ledesma wanted to clear 1.050 ha forest on the borderline to RBLY for sugar cane fields. This led to a front made of Greenpeace, an Argentinean workers syndicate<sup>14</sup> and the members of the SC who stressed the importance of the Sauzalito forest as a biological corridor for the park. Thanks to this campaign, in 2007 Ledesma renounced definitely the deforestation and incorporated Sauzalito as a private reserve into the development plan of Jujuy province.

PNT faces some threats that differ from the other sites. The southern and western borders of the park receive a high pesticide impact from the adjacent banana mono-cropping. The beach on the eastern coast is the most important Caribbean nesting site of sea turtles, especially of the green sea turtle (*Chelonia mydas*). The sea turtle conservation programme is a success that led to a strong increase of turtle nests in the last 30 years. On the other hand, the illegal trade of turtle eggs persists; the MINAE has only five rangers to monitor a 24 km long beach. Some of the poachers that collect the turtle eggs are at the same time heavily armed cocaine trafficking intermediaries; Tortuguero beach lies in the speedboat drug trafficking route from Colombia to North America. The Barra de Tortuguero village on the northern border is the tourist centre of the park, and the increasing number of visitors has never been subject of an environmental impact assessment. Lack of sewage treatment in the village pollutes the surrounding coastal ecosystem. The tremendous success of tourism with its high number of visitors paying park entrances sharply contrasts with the absence of MINAE investments in the park or the village.

The eighties brought to RBY an increased pressure on the use of natural resources through oil and logging activities, way beyond the control of Ecuadorian authorities. These activities, along with the environmental impacts associated to them, seriously threaten the functionality of an ecosystem on which even indigenous peoples in voluntary isolation rely. The current

---

<sup>13</sup> The *Federación de Colonizadores de Yucumo* (FECY) changed their name to *Federación de Productores Agroecológicos de Yucumo* (FEPAY).

<sup>14</sup> Central de los Trabajadores Argentinos (CTA)

overlapping normative, implying different territories<sup>15</sup> and different institutions<sup>16</sup>, is so complex that it has only brought increasing pressures on the RBY.

Urban expansion, disposition of industrial pollutants and infrastructure projects, are the main problems the RBCV faces. They threaten the environmental goods and services the RBCV provides to the metropolitan area and its associated sprawl. The *mata atlântica* and water reservoirs are important issues for the supervisory council. It is interesting to note that the threat of an infrastructure project gave birth to the process that conducted to the creation of the biosphere reserve.

## 5 Livelihoods

Table 7 shows the local peoples livelihoods in the protected areas. Livelihoods are listed for important stakeholders at the sites. The local average income illustrates the economic situation, which is compared to the national average income and classified into two levels: low and balanced. This qualitative classification is based on western economic models, each country's absolute figures can be found in table 2.

The local economic situation in seven of the nine parks is bad; the average income is low compared to the respective national average income. The high Gini indices of the countries (see table 2) have a double impact on the economic situation of the local population. First, the protected areas lie in peripheral regions: central governments do not attend to them or attend them poorly. Second, the locals, often indigenous peoples or colonists, form part of the marginalized classes of society. Due to its special location, which includes the largest urban agglomeration of South America, the economic situation in Brazil's RBCV gets the classification low/balanced because it includes all social classes of Brazilian society.

Tourism is increasing, with different intensities, at all the sites. Tourism generates high income, especially in PNT and RBM, but the locals have a very small part in the earnings of the tourist trade. It benefits external stakeholders as tour operators and hotel chains. Tourism is praised as an alternative for local livelihoods, but on most sites it is only another example for the failure of the famous trickle-down effect (Gardner & Lewis 1996, Potter et al. 1999).

---

<sup>15</sup> National park, Waorani ethnic reserve, intangible zone, biosphere reserve

<sup>16</sup> Public and private, the latter national and international

Table 7: Local people livelihoods in the protected areas

Protected Area	Country	Livelihoods	Income <sup>a</sup>
Parc amazonien de Guyane française	Guiana, France	<b>Indigenous peoples:</b> Fishing, hunting, shifting cultivation, cattle raising, gold washing, handicrafts, tourism	Low
Parc naturel régional de Guyane française – Pôle ouest	Guiana, France	<b>Indigenous peoples:</b> Fishing at sea and in estuary, shifting cultivation, hunting, handicrafts, selective collection of turtle eggs, tourism	Low
Reserva de Biosfera Manu	Peru	<b>Indigenous peoples in voluntary isolation:</b> Hunting, fishing, gathering, shifting cultivation <b>Contacted indigenous peoples:</b> Hunting, fishing, gathering, shifting cultivation, logging, handicrafts <b>Colonists:</b> Sedentary agriculture, cattle raising, logging, tourism	Low
Santuario de Flora Isla de la Corota – Humedal Laguna de la Cocha	Colombia	<b>ADC members<sup>+</sup>:</b> Agro ecological agriculture and conservation, cattle raising, tourism <b>Other peasants<sup>+</sup>:</b> Conventional sedentary agriculture, cattle raising, logging and charcoal production	Balanced <sup>+</sup> Low <sup>+</sup>
Reserva de Biosfera y Territorio Indígena Pílon Lajas	Bolivia	<b>Indigenous peoples:</b> Shifting cultivation, gathering, hunting, fishing, logging, weaving of palm panels <b>Colonists:</b> Sedentary agriculture, cattle raising, logging	Low
Reserva de Biosfera de las Yungas	Argentina	<b>Local population:</b> Traditional agriculture, livestock, transhumance, logging, hunting, handicrafts, tourism	Low
Parque Nacional Tortuguero	Costa Rica	<b>Afro Caribbean peoples:</b> Tourism, fishing, poaching, drug trafficking	Low
Reserva de Biosfera Yasuní	Ecuador	<b>Indigenous peoples in voluntary isolation:</b> Hunting, fishing, gathering, shifting cultivation <b>Contacted indigenous peoples:</b> Hunting, fishing, gathering, shifting cultivation, logging, petrol activities, handicrafts, tourism <b>Colonists:</b> Sedentary agriculture, cattle raising, logging	Low
Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo	Brazil	<b>Local population:</b> Economic activities of the primary, secondary and tertiary sector, youth programme in environmental education	Low/ balanced

**NOTES**

a. of local population compared to the national average income

Contacted indigenous peoples living in Peru's RBM, Bolivia's RBTIPL and Ecuador's RBY share the same sustainable livelihood – hunting, fishing, gathering, and shifting cultivation. They all have incorporated some activities that provide currency: logging, handicrafts, tourism and oil activities. Indigenous peoples in voluntary isolation also live in Peru's RBM and Ecuador's RBY. Their livelihood represents the traditional form of living in and with the Amazonian rain forest. On the other hand, the colonists with their imported rationale base their livelihood on another set of activities, most of them unsuitable for the ecosystem: sedentary agriculture, cattle raising, logging, and tourism.

The two French Guianan parks have a specific feature: zones with collective use rights (*zones de droits d'usage collectifs*, ZDUC) and concessions fixed by prefectural decrees. Locals have the right to hunt, gather, fish and carry out traditional slash and burn agriculture

in these zones for subsistence purposes, only having the right to sell surplus products to other community members. This restricts their commercial transaction possibilities to the parks interior and stands as a strong limitation for development, even a sustainable one.

The Teko of PAG see tourism as becoming their main source of income in the future. That is the reason why the mayor, as well as the customary authority, expects a lot of the park.

Another problem in PNR is a good example of the contradictions between western conservation laws and locals' ancient customary rights. The beaches of d'Awala-Yalimapo are the most important nesting sites of leatherback turtles (*Dermochelys coriacea*) in the world. In 1998, the French Government declared this site a French natural reserve, the *Reserve naturelle de l'Amana*, which forms part of the 2001 founded PNR. This reserve is a strictly protected area where selective collection of turtle eggs is forbidden. The local Amerindian ethnic group Kali'na, demands the official recognition of their customary right for selective collection of turtle eggs.

In the Colombian HLC, the ADC works on the development of economic alternatives and sustainable production systems. The association promotes agro-ecological production, environmental protection, gender and generational justice, and the recovery of cultural identity. This process led to a positive impact on livelihoods for ADC members. Their average family income is 2.8 times higher than the average family income in the La Cocha region and 1.2 times the national family income. The process also implicates non-monetary benefits. It contributes to an improvement of well-being and to the appropriation of the philosophic concept of human scale development<sup>17</sup> (Max-Neef et al. 1989).

While the locals inside RBLY maintain sustainable systems of traditional agriculture, the eastern circumference is characterised by agro-industrial production of sugar cane and soya beans. This production has changed the landscape profoundly during the last fifty years.

The creation of PNT changed the regime of common property at the site into a regime of state-owned property. With the foundation, the locals left their rights to use the natural resources in the park from one day to another. Their subsistence economy changed to an illegal exploitation of the same natural resources. Since the nineties, there has been a strong increase of tourism in the park. The majority of the traditional Afro-Caribbean inhabitants

---

<sup>17</sup> Human Scale Development is defined as "focused and based on the satisfaction of fundamental human needs, on the generation of growing levels of self-reliance, and on the construction of organic articulations of people with nature and technology, of global processes with local activity, of the personal with the social, of planning with autonomy, and of civil society with the state" (Max-Neef et al. 1989).



work now in the tourist trade occupying the lowest social scale employments, whereas the Costa Ricans from the capital hold the qualified jobs. The social inequalities have a direct correlation with the tourism “market”. Due to the growth of tourism, the social inequalities have increased in PNT. About 10% of the tourism money remains in the community, the other 90% return to San José, USA and Europe.

In Brazil’s RBCV, secondary and tertiary economic activities employ millions of inhabitants. However, there are also primary sector stakeholders, whose livelihoods derive from family agriculture, as in most of the other protected areas. In some of them, industrial and tertiary activities do exist but in a much smaller scale. The youth programme in environmental education is the principal measure of RBCV to improve livelihood of the local population. It is a two-year environmental education programme for disadvantaged youth that offers working opportunities in fields such as tourism, agroforestry and recycling. This programme constitutes a veritable socio-environmental policy for young people and represents an important contribution for the creation of an “eco-jobs” market. At present, there are 15 eco-formation centres in 12 municipalities. In its twelfth anniversary, the program has graduated 1.300 students and offered 670 environmental employments.

## **6 Relation between participation, conservation and livelihoods**

The case studies show the difficulties in assessing the contribution of the participatory paradigm to the reconciliation of conservation and development objectives. Participatory processes in protected areas form part of and reflect the political, economic and social development of their countries. Most of the Latin American democracies are weak: it is a matter of *voting democracies*, i.e. the citizens have the right to vote, but not of *civil democracies* – large parts of the population do not feel as equal citizens and de facto, they are not (PNUD 2004). A *voting democracy* is definitely not the best basis to reach self-mobilised participation of protected areas.

Table 8 tries to synthesize the results from chapters 3 to 5 by giving an overview like win-win-matrix (compare EEPA methodology). Participation and conservation are divided into three categories with the values low, medium and high. Because it cannot be the purpose of protected areas to generate high incomes, livelihoods is divided into only two categories, low and balanced.

The levels of participation in park management are mostly low to medium with some cases of a high level (compare table 5).

The levels of conservation for seven sites received the medium classification. Without any doubt, there is success in the conservation of the parks, i.e. the sea turtle conservation programme in PNT. However, external actors threaten all of them, from the local (colonists), to the national (illegal logging cartels) and international level (transnational oil companies). All sites have in common a low budget of park administration with an insufficient number of rangers and technical staff (compare table 6). Nevertheless, the declaration of a site as a protected area gives it an advantage for conservation compared to a neighbouring zone not declared as such. The two parks in French Guiana form an exception: the country has a remote location on the South American continent and its population density is very low. Both factors are favourable for a high conservation level and low rate of external actors threatening the integrity of the parks.

Table 8: Levels of participation, conservation and livelihoods in the protected areas

Protected Area	Country	Participation <sup>a</sup>	Conservation <sup>b</sup>	Livelihoods <sup>c</sup>
Parc amazonien de Guyane française	Guiana, France	Medium/high	Goals attained	Low
Parc naturel régional de Guyane française – Pôle ouest	Guiana, France	Low/medium	Goals attained	Low
Reserva de Biosfera Manu	Peru	Low	Medium	Low
Santuario de Flora Isla de la Corota <sup>x</sup> – Humedal Laguna de la Cocha <sup>+</sup>	Colombia	Medium <sup>x</sup> High <sup>+d</sup>	Medium	Balanced <sup>d</sup> Low <sup>e</sup>
Reserva de Biosfera y Territorio Indígena Pilón Lajas	Bolivia	High	Medium	Low
Reserva de Biosfera de las Yungas	Argentina	Low/medium	Medium	Low
Parque Nacional Tortuguero	Costa Rica	Low	Medium	Low
Reserva de Biosfera Yasuní	Ecuador	Low	Medium	Low
Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo	Brazil	High	Medium	Low/balanced <sup>f</sup>

#### NOTES

- Criteria low – medium – high
- Criteria Goals not attained – medium – Goals attained
- Criteria low – balanced
- ADC members
- Other peasants
- RBCV includes the whole population of Sao Paulo urban agglomeration

Most of the sites have low local people livelihoods compared to the national averages. The protected areas lie in peripheral regions and the locals, often indigenous peoples or colonists, form part of the marginalized classes of society (compare table 7).

The exemplary park of this study is *Humedal Laguna de la Cocha* in Colombia. It has the history of a *campesino* community reaching an excellent integration between conservation

*GIAN Project – Conservation and livelihoods: Assessing participatory approaches to protected areas management*

and livelihoods with the help of a participatory process of sensitisation, apprenticeship and empowerment, and with gender and generational equity and a tangible distribution of benefits of conservation. By means of the *minga*, ADC members achieved positive results, beginning with conservation in every farm, they were able to increase the community-managed areas. This process of auto management has led to community-based decision-making. We can consider the experience of *campesinos* and indigenous peoples from La Cocha a “bottom up management”. As recognition and honour for their efforts, ADC has received 19 national and international awards since 1990.

The parks with the poorest overall assessments are the three parks in the tropical Andean countries, plus Costa Rica’s PNT and Argentina’s RBLY. Peru’s RBM, Bolivia’s RBTIPL and Ecuador’s RBY share a similar situation of highland peoples displaced to the Amazon basin (see chapter 4). Compared to the first-mentioned, the Costa Rican and Argentinean parks have an advantage in livelihoods, both lie in the upper middle income countries (table 2), i.e. a low income in these countries normally signifies better livelihoods than a low income in Peru, Bolivia or Ecuador.

## 7 Conclusions and recommendations

The synthesis finishes with the principal conclusions and recommendations of the field studies. The nine studies from eight Latin American countries reflect the enormous natural and cultural diversity of the continent. A good interplay of participation, conservation and livelihoods is an imperative for functioning protected area systems in Latin America. On the one hand, the field studies reveal many weaknesses, but on the other they illustrate a lot of success in the participatory management of protected areas. Participatory processes are very complex, they need a broad time horizon and a lot of staying power, but they have no real alternatives. The developed world concept of “parks without people” in no way applies to the Latin American reality.

The following is a selection of the conclusions and recommendations from the nine case studies:

The *Parc amazonien de Guyane française*, founded in 2007, would definitely impact the living conditions of the indigenous population’s in the region. Unfortunately, the authorities did not make use of the opportunity given with the park creation to recognize a legal status of the local indigenous populations and their unequivocal rights of their territories and resources.

*Parc naturel régional de Guyane française – Pôle ouest* has the problem that different types of communities and territorial entities have competences to take measures relative to the  
*GIAN Project – Conservation and livelihoods: Assessing participatory approaches to protected areas management*

development or conservation of the same territory. Within the park exists a mosaic of different zones with particular regimes and a variety of instances founded to intervene in each of these zones without a veritable harmonisation of competition. The Kali'na communities feel that large portions of their zones with collective use rights now have a juridical regime of environmental protection preventing them from carrying out their economic and environmental practices, which allow them to satisfy their new needs.

The SC of the Peruvian *Reserva de Biosfera Manu* has the claim to incorporate participation and co-management as elements in the planning, monitoring and evaluation of the protected area – a process that just began. A legitimate, effective and entire participation of the local population in planning, decision-making processes and benefits increases the possibilities of meeting the conservation objectives of the site and fosters environmental democracy. Capacity development for communities, local governments and staff of RBM is necessary to reach a more inclusive and technical management.

During 27 years of institutional history in the Colombian *Santuario de Flora Isla de la Corota – Humedal Laguna de la Cocha*, the ADC guided its action through two basic premises: “We construct starting from the difference”<sup>18</sup> and “Who knows not, loves not”<sup>19</sup>. This process of social construction was not free of obstacles and threats, nevertheless until this moment it did very well. The successful conservation efforts based on a vigorous and determined public participation are an excellent example for the integration and completion on different working scales. Their livelihoods have increased in quantity and quality. Capacity development led ADC members to increased political participation. At the interior of the organisation, disentangling and delegation characterise the governance.

For the Andean colonists in the colonisation zone adjacent to *Reserva de Biosfera y Territorio Indígena Pilon Lajas* in Bolivia, the access to land is one of the principal motivations to occupy the space, which in consequence leads to rain forest deforestation. The participation paradigm looking for the involvement of communities in protected area management seems to be inefficient because it is separated from the economic dimension. The search for production alternatives to deforestation is without doubt one of the priorities imposed to the promoters of protected area conservation. The locals need an appropriate juridical frame permitting them a sustainable use of forest resources. Using the words of a forest technician: “to obtain the respect to the norms, you have to give rights”.

---

<sup>18</sup> “Construimos a partir de la diferencia”

<sup>19</sup> “Quien no conoce, no ama”

The foundation of *Reserva de Biosfera de las Yungas* in Argentina allowed the creation of certain processes. Various committees have been created, but they were not sustainable and, consequently, they are still not institutionalised. The richness of the territory and its resources in ecological, economic and cultural terms fed and founded diverse quests. Although these quests were diverse, all of them passed through the fight for power: territorial recognition, political positioning connected to this fight, political recognition, control of funds for conservation and development, economic positioning. The example of RBLY shows how difficult it is to match the agendas and objectives of so many different groups as managing directors, national and provincial representatives and autochthonous leaders. The NGOs pretend to breach the gap between all these actors, but they also have their own agenda and interests to defend.

The Costa Rican *Parque Nacional Tortuguero* faces a culture shock. The “white” culture stands for the establishment from the capital that arrived with the tourist trade, and the “black” culture represents the local Afro-Caribbean communities and illegal immigrants who share the lowest levels of society. The massive increase of tourism led to many consequences in the local population: a disorganisation of the community and a loss of identity due to the massive arrival of immigrants. A large number of local actors ask themselves about the transcendence of this situation. What will be the ethic values future generations inherit from them? Now they are the victims of an increase in tourism development: 100.000 annual visitors in a village of 1.200 inhabitants stand for mass tourism. Nevertheless, the success of the sea turtle conservation programme led to a considerable increase in the living standard of the local population. There is now a demand concerning participation in the management of natural resources opening the door for a community development plan based on an improvement of their living conditions: more equity, autonomy, security and sustainability.

The Ecuadorian *Reserva de Biosfera Yasuní* region shows strong social disturbances provoked by the multiplication of interventions from external agents who have changed the local social dynamics and the interests at play. This led to a situation of constant tension and conflict regarding the control and access to territory and natural resources. National and international organisations introduced the participation paradigm in the protected area management to achieve the conservation objectives. This continues to be a reflection of the dominant *mestizo* vision: the implementation of productive projects, such as eco or community tourism or breeding of poultry or cattle raising is an import part of production systems and consumption habits of the *mestizo* society, causing changes in the relation of the indigenous peoples to nature. In their discourse, the leaders of the Quichua and Waorani nations have assimilated the *mestizo* conceptions of biodiversity conservation and participation as a matter of gaining economic resources. Projects undertaken by national and

*GIAN Project – Conservation and livelihoods: Assessing participatory approaches to protected areas management*

international environmental organisations have configured the myth of the ecological indigenous guardian of nature. Nevertheless, exploitation and illegal extractive activities are daily practices in the Yasuní zone. The implementation of the participatory projects has not contributed to the improvement of the living conditions of the indigenous peoples, nor have they lowered the anthropogenic impact on the ecosystems, but they constitute an agent that modifies the social environment and creates economic differences between leaders and remaining community members. The participatory models of protected area management for RBY should start from a profound study of the cultural and social characteristics of the indigenous peoples living there.

The participation in *Reserva da Biosfera do Cinturão Verde da Cidade de São Paulo* in Brazil is effective. The actors make common decisions concerning the objectives of the biosphere reserve that lead to the carrying out of actions. The participation mechanisms put into effect through the management system or the activities in the reserve allowed the constitution and consolidation of an actors' network. This network is still evolving and has implemented first steps to improve the representation. Despite the persistence of weaknesses, above all actors representing personal interests, this actors' network is functional. It allows for an effective dialogue leading to the conception and realisation of actions to connect the local population with the conservation of nature. The objective to conciliate conservation and development is the principal motive of the biosphere reserve concept. The functioning actors' network leads to the creation of new instances of dialogue, the eco-formation centres are a good example of this.

Two quotes from the case studies will conclude the synthesis. They reflect in a good way challenges and expectations of participatory processes in protected area management.

*Si la rhétorique participative est présente à tous les niveaux des documents déjà élaborés, les modalités de sa mise en œuvre ne sont pas vraiment précisées.*

Geoffrey Filoche<sup>20</sup>

*En un mundo ideal, la participación debe ser una cualidad que distinga a las áreas protegidas y cree capital social entre las poblaciones locales.*

Roberto Ariano & Joerg Elbers<sup>21</sup>

---

<sup>20</sup> Filoche 2007:9

<sup>21</sup> Ariano & Elbers 2007a:21

## 8 References

- Andrade, G. I. (ed.) 2007, "Informe nacional sobre el desarrollo del Sistema Nacional de Áreas Naturales Protegidas de Colombia", Bogotá, UAESPNN, unpublished, 121 p.
- Ariano L. de N., R. and Elbers, J. 2007a, "Estudio de caso: Reserva de Biosfera del Manu", 26 p.
- Ariano L. de N., R. and Elbers, J. 2007b, "Estudio de caso: Santuario de Flora Isla de la Corota – Humedal Laguna de la Cocha", 26 p.
- Bishop, K., Dudley, N., Phillips, A. and Stolton, S. 2004, "Speaking a common language: the uses and performances of the IUCN system of management categories for protected areas", Cardiff, Cardiff University; IUCN; UNEP-WCMC, 191 p.
- Bottazzi, P. 2007, "Reserve de Biosphère et Territoire Autochtone Pilon Lajas: Synthèse des résultats de terrain. Décembre 2007", 38 p.
- Burkart, R. et al. 2007, "Informe Nacional sobre las Áreas Protegidas en la Argentina", unpublished, 89 p.
- Cabodevilla, M. A. 2004, "El exterminio de los pueblos ocultos", Quito, CICAME, 211 p.
- Comisión de Áreas Protegidas de Perú (ed.) 2007, "Informe Nacional del Sistema Nacional de Áreas Naturales Protegidas por el Estado Peruano - SINANPE", Lima, unpublished, 32 p.
- De la Torre, L. M. and Sandoval, C. 2004, "La reciprocidad en el mundo andino: El caso del pueblo de Otavalo", Quito, ILDIS-FES, Abya-Yala, 58 p.
- Deldicque, M. 2007, "Mise en œuvre de la méthodologie EEPA dans la Réserve de Biosphère de la Ceinture Verte de São Paulo: Résultats et discussion sur la méthodologie", 22 p.
- Dijck, P. van and Haak, S. den 2007, "Construcción Problemática: IIRSA y las Asociaciones Público-Privadas en la Infraestructura Vial", Amsterdam, Centro de Estudios y Documentación Latinoamericanos
- Filoché, G. 2007, "Les Kali'na d'Awala-Yalimapo et le Parc naturel régional de Guyane française: Une participation indirecte pour une mosaïque de régimes et d'objectifs", 20 p.
- Filoché, G. and Aubertin, C., 2007, "Les Teko de Camopi et le Parc amazonien de Guyane française: Une participation éclatée pour des résultats incertains", 18 p.
- Gagnon, S. and Hufty, M. 2008, "La Réserve de biosphère des Yungas (Argentine)", 27 p.
- Galloni D'Istria, C. 2007, "Rapport de terrain: Parc National de Tortuguero, Costa Rica", 27 p.
- Gardner, K. and Lewis, D., 1996, "Anthropology, development and the post-modern challenge", London, Pluto Press, 192 p.
- Gonçalves, M. A. (ed.) 2007, "Informe Nacional sobre Áreas Protegidas en Brasil", Serie Áreas Protegidas de Brasil 5, Brasilia, Ministerio del Medio Ambiente, 124 p.

- Grupo Semillas and ILSA (Instituto Latinoamericano de Servicios Legales Alternativos) 2007, "La IIRSA ¿Una propuesta integradora? Bogotá, 39 p.
- Guerrero, E., Sguerra, S. and Rey, C. (eds.) 2007 "Áreas Protegidas en América Latina. De Santa Marta 1997 a Bariloche 2007", Bogotá, Parques Nacionales Naturales de Colombia y Comité Colombiano UICN, 100 p.
- Huffy, M., 2007, "El Marco Analítico de la Gobernanza », Actas del Congreso « Gobernabilidad y gobernanza en los territorios de América Latina". Cochabamba, 19-20 de septiembre de 2006, CESU, IFEA, IIG, IRD, NCCR-NS.
- Lockwood, M. 2007, "Global protected area framework", in Lockwood, M., Worboys, G. L. and Kothari, A. (eds.), Managing protected areas: A global guide, London, Earthscan, p. 73-100
- Max-Neef, M., Elizalde, M. A. and Hopenhayn, M. 1989: "Human Scale Development: An Option for the Future", development dialogue 1989:1, p. 5-80
- MINAE 2006, "El Sistema de Áreas Silvestres Protegidas de Costa Rica: Informe Nacional", 92 p.
- Moriame, E. and Joeger, C., 2007, "Les comptes économiques de la Guyane en 2006: premiers résultats L'investissement spatial propulse la croissance", INSEE - Antilles-Guyane, 4 p. [http://prod-afd.afd.zeni.fr/jahia/webdav/site/cerom/users/admin\\_cerom/public/Pdf/CR2006\\_guy.pdf](http://prod-afd.afd.zeni.fr/jahia/webdav/site/cerom/users/admin_cerom/public/Pdf/CR2006_guy.pdf), downloaded 15.01.2008
- Persic, A., Arico, S., Calvo, G. and Ishwaran, N. 2008, "Ecosystems and human well-being: UNESCO biosphere reserves as learning laboratories for sustainable development", in Secretariat of the Convention on Biological Diversity, Protected areas in today's world: their values and benefits for the welfare of the planet, Montreal, Technical Series no. 36, p. 87-95
- PNUD (Programa de las Naciones Unidas Para el Desarrollo) 2004, "La democracia en América Latina: Hacia una democracia de ciudadanas y ciudadanos", New York, 255 p.
- Potter, R. B., Binns, T., Elliott, J. A. and Smith, D., 1999, "Geographies of development", Harlow, Prentice Hall, 312 p.
- Ramsar Convention Secretariat 2006, "The Ramsar Convention Manual: a guide to the Convention on Wetlands (Ramsar, Iran, 1971)", 4th ed., Ramsar Convention Secretariat, Gland, Switzerland, 114 p.
- Rivas, A. (comp.) 2006, Gobernanza de los Sistemas Nacionales de Áreas Protegidas en los Andes Tropicales: Diagnóstico regional y análisis comparativo, Quito, UICN, 75 p.
- Rosas, P. and Clusener-Godt, M. (eds.) 2007, "Reservas de la Biosfera: Un espacio para la integración de conservación y desarrollo. Experiencias exitosas en Iberoamerica", UNESCO, 248 p.
- Seibert, P. 1996, "Farbatlas Südamerika: Landschaften und Vegetation", Stuttgart, Ulmer, 288 p.
- SERNAP 2007, "Bolivia: Informe sobre el Sistema Nacional de Áreas Protegidas", La Paz, 88 p.



- Ulloa, R. et al. 2007, "Situación actual del Sistema Nacional de Áreas Protegidas del Ecuador. Informe Nacional – Ecuador 2007", Quito, Ministerio del Ambiente, Comité Ecuatoriano de la UICN, Comisión Mundial de Áreas Protegidas CMAP, 152 p.
- UICN 2008, "Ecos de Bariloche: Conclusiones, Recomendaciones y Directrices de Acción", Quito, UICN, 8 p.
- UNDP 2007, "Human Development Report 2007/2008. Fighting climate change: Human solidarity in a divided world", New York, 384 p.
- UNESCO 1996, Biosphere Reserves: The Seville Strategy & the statutory framework of the world network, UNESCO, Paris
- Utreras, E. 2007, "Yasuní Report", 43 p.