

# The impact of Protected Areas on the Well-being of Pantaneiro Riverine Communities

Anita Valente da Costa <sup>I</sup>  
Miraíra Noal Manfroi <sup>II</sup>  
Rafael Chiaravalloti <sup>I,II</sup>

**Abstract:** The set aside of protected areas is one of the pillars of initiatives focused on nature conservation. Studies seeking a broader understanding of the relation between human well-being and protected areas are key to support a social-ecological balance these initiatives. In this paper, we sought to understand, through interviewers structured around the concepts of freedom, security, health, and social relations, the extent to which protected areas in the Pantanal have impacted the lives of two riverine communities in the region. We show that both communities were negatively impacted in all axes of well-being evaluated. However, each group experienced the impacts differently, depending on the process of creation, category and management strategy of each protected area. We also show that people see economic, social, and ecological positive aspects of the protected areas. Broader understanding about well-being, as applied in this study, allow us to better uncover the relation between human / nature and the potential for effective participation of traditional communities.

<sup>I</sup> IPÊ - Instituto de Pesquisas Ecológicas, Nazaré Paulista, SP, Brasil.

<sup>II</sup> University College London, Londres, Reino Unido.

**Keywords:** Pantanal, traditional communities, Protected Areas, well-being.

São Paulo. Vol. 25, 2022

*Original Article*

DOI: <http://dx.doi.org/10.1590/1809-4422asoc20210035r2vu2022L4OA>

## 1. Introduction

The creation of protected areas is one of the main pillars of actions focused on nature conservancy and sustainable use of natural resources (BRITO, 2000). The milestone for the creation of this initiative took place between the 1860s and 1870s, with the creation of the Yellowstone and Yosemite National Parks in the United States of America (PÁDUA, 2010). In both cases, the purpose was to preserve the wilderness in these areas (DIEGUES, 1996). However, the limitations and restrictions that came along with the parks also affected local people and communities, with records of the formal cases of displacements by protected areas. From 20<sup>th</sup> century onwards, the creation of National Parks, similar to the USA's ones, became an important scheme of nature conservation. Protected Areas that followed the same structured of Yellowstone and Yosemite were created in dozens of countries around the world. However, with the international spread of this framework, communities all over the planet same their livelihoods impacted (ADAMS; HUTTON, 2007).

In 1933, the Convention Relative to the Preservation of Fauna and Flora in their Natural State, also known as the London Convention, was the first step towards reducing possible negative social impacts of the protected areas. During this occasion, clear concepts and strategies were defined for the implementation of this model (MORSELLO, 2001). Along these lines, in 1948 was established the International Union for Conservation of Nature (IUCN), which created the Commission of National Parks and Protected Areas aiming to promote guidance on creation and management of these areas<sup>1</sup>. Nevertheless, the most important breakthrough regarding the history of protected areas may be the United Nations Conference on the Human Environment held in Stockholm, in 1972 (SCHERL, et al. 2006). From that point onwards nature has started to be seen as a financial resource and that economic growth and conservation are goals inextricably linked (HOLDGATE, 1999). In this historical context, different views and conservation models that challenged the existing format of wilderness (or untouched nature) started being included (DIEGUES, 1996).

The acknowledgement that local development and natural protection are intrinsically linked has led to the development of several tools to better understand the relation between communities and nature (WOODHOUSE et al., 2015). Among them, stands out the concept of human well-being, disseminated specially by the Millennium Ecosystem Assessment (2005). This report defined that “human well-being” would be made of five dimensions: the necessary resources for a good and stable life, health, good social interactions, safety and freedom of choice (MEA, 2005). It is worth mentioning that there are different assessment standards as to “human well-being” and the framework with the five pillars is just one of many possible structures. (COLLOMB, 2012).

---

1 - <https://www.iucn.org/about/iucn-a-brief-history>

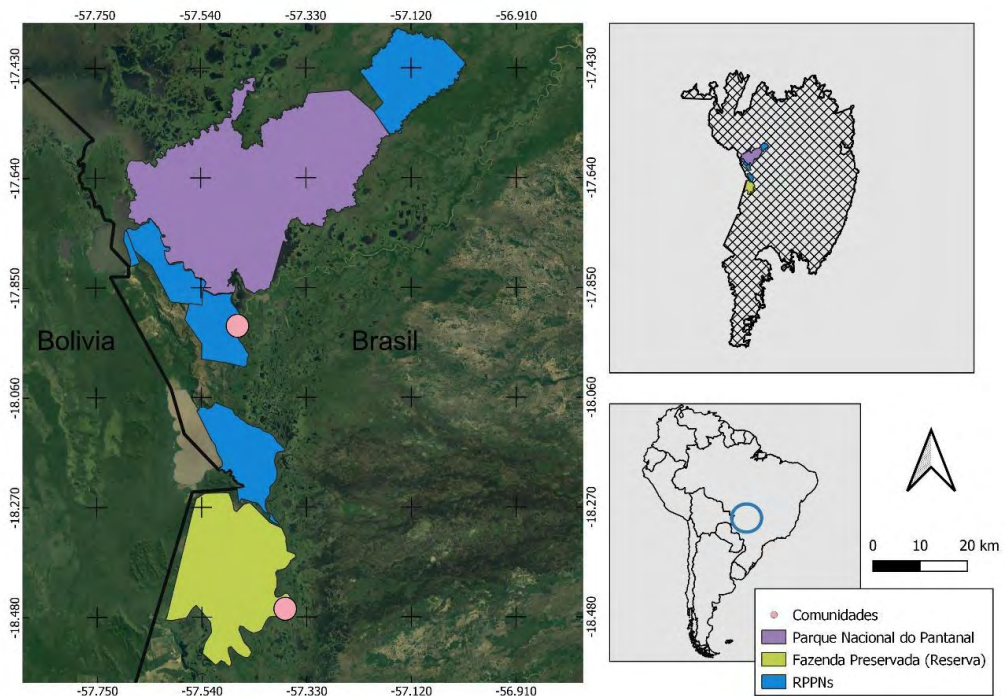
## 2. Protected Areas and Traditional Communities in the Pantanal

Considering the context of creation of protected areas and the well-being of local communities, we highlight the example of the Brazilian Pantanal wetland, more specific the Western Border of this region. The Pantanal is considered one of the largest wetlands in the world, encompassing over 179,000 sq. km and areas of three countries (Brazil, Bolivia, and Paraguay) (JUNK et al. 2006). The flood pulse is the main environmental feature of the Pantanal and, depending on the year, it can cover up to 110,000 Km<sup>2</sup> of the region (JUNK et al. 2006). Unlike most of Brazilian ecosystems, Pantanal is considered a relatively preserved region, with near 80% of its native vegetation conserved (TOMAS et al. 2019).

Pantanal's Western Border is a key region for biodiversity conservation. Due to the altitude variation leading to the presence of different habitats (from wetlands to high-altitude forests), the high level of conservation and the sheer variety of vegetations, the area registers the occurrence of endangered species (as jaguars), endemic (the *Aspilia grazielae* shrub, for example) and those species (such as the scorpion mud turtle *Kinosternon scorpioides*) that use the region as a wildlife corridor connecting the Amazon and the Atlantic Forest populations (TOMAS et al., 2015; TOMAS et al., 2010).

Since the beginning of the conservation agenda in Brazil between the 1960s and 1970s, the Pantanal always has been seen as a priority area for nature conservation (SCHALLER; VASCONSELOS 1978). In 1971, the Biological Reserve (REBIO) of Caracará was created, with com 80.000 hectares, located near the frontier with Bolivia, at the centre of Pantanal western border (CHIARAVALLOTI, 2019; TOCANTINS, 2006). As a result of pressure from local ranchers who had their properties flooded during 1974s flood period, in 1981 REBIO was replaced by the Pantanal Matogrossense National Park (Parque Nacional do Pantanal Mato-Grossense), enlarging the area to 135,000 hectares (COUTO et al. 1975; PARMA, 2003). In 1992, three other Private Reserves of Natural Heritage (Reservas Particulares do Patrimônio Natural - RPPN) were created on the surroundings of the National Park and, in 2005, another one was created on the southern side of park. These areas were acquired by the NGO Nature Conservation (TNC) and donated to the Brazilian NGO Ecotrópica (TOCANTINS, 2006). In 2006, a fifth RPPN was created in the region by a mining company and its administration was given to a local NGO (CHIARAVALLOTI, 2017). Both the National Park and the RPPNs are Conservation Units, which means they were officially created and registered on the National System of Conservation Units (LEI N° 9.985, DE 18 DE JULHO DE 2000). In 2006 and 2008, another two areas were bought by private owners who were also interested in the region's conservation (FRANCO et al., 2013). However, even though these areas were not set aside as Conservation Units, and therefore not officially registered on the National System of Conservation Units, they are managed as protected areas and recognized by the local population as "reserves" (SIQUEIRA, 2018).

**Figure 1: on the left side of the figure, the location of the two communities studied in Pantanal**



Below is community 1 and above is community 2. In blue, all protected areas of the region (both Conservation Units and protected ranches). On the right, there is a map pointing the location of the study area in Brazil and Latin America

Source: Authors.

In the region, there are around 700 people, clustered in two main settlements and smaller familiar settlements dispersed alongside Paraguay River and Cuiabá (SIQUEIRA, 2018). The main livelihood is fishing. The Riverine communities of Pantanal depend on selling fish in Corumbá, gathering bait (specially crabs and tuvira) and/or driving the boats used for the fishing tourism (CHIARAVALLOTI, 2019). Fishing is also the main source of protein for the local communities (MANFROI, 2019).

The population of the western border of Pantanal has its origin mostly related to the indigenous group Guató (CHIARAVALLOTI, 2019). The Guató, differently of some other indigenous groups in Pantanal, were not deeply affected by the colonization process that took place between the 16<sup>th</sup> and 17<sup>th</sup> centuries (EREMITES DE OLIVEIRA, 2003). However, throughout time some other groups joined the remaining families of Guató on the western border of Pantanal, such as the Paraguayans on the run after the Paraguayan War (or the Triple Alliance War), and former slaves from the mines at Cuiabá

area in Mato Grosso, both in the end of the 19<sup>th</sup> century (SIQUEIRA, 2018). Nowadays, the families are the result of this mix among afro-descendants, Paraguayans and other outsiders (CHIARAVALLOTI, 2019).

The creation of Protected Areas in the Western Border of the Pantanal, either Conservation Units or Protected Areas with no formal recognition, many times, did not take into account the possible impact on local communities (CHIARAVALLOTI et al., 2017; SIQUEIRA, 2018; CHIARAVALLOTI, 2019). There are several records of possible conflicts between the conservation and the local development agenda (CHIARAVALLOTI, 2019). This study aimed to have a better understanding of these conflicts, within the perspective of well-being, assessing the extent to which the creation of protected areas in the western border of Pantanal actually affected two local communities.

### 3. MATERIALS E METHODS

#### 3.1. Data collection and analysis

In order to assess the well-being of the communities in the surroundings of the Protected Areas in the western border of the Pantanal wetland, this paper uses the well-being framework proposed by Woodhouse et al. (2015), which links well-being domains - “Voices of the Poor” to the perspective of “The well-being in Developing Countries”. The data was collected through semi-structured interviews (SSIs), with the interviewer leading the process, using a few pre-determined focal questions and the interview resembles a conversation (BONI; QUARESMA, 2005).

Qualitative analyses were initially used to provide an overview of the information, considering the particularities of each family for a better understanding of well-being. Our analyses was based on thematic analysis (AT). AT enables the identification and analysis of patterns in qualitative data (BRAUM; CLARKE, 2006) and to provide a clearer picture of the results’ patterns, basic quantitative analysis such as proportion and differences were also used (BRAUM; CLARKE, 2006).

In order to create the thematic groups results of the interviews were separated into 4 major themes, as follows: (1) Territory and Land use modification – Freedom, (2) Residential moves– Safety, (3) Fear/Apprehension to practice activities – Health and Safety and (4) Interaction Communities versus conflict parties – Social relationships.

For each well-being axis, the authors tested if the answers of the two communities assessed were significantly different by using logistic regression analysis. Furthermore, it was evaluated which of these pillars was the most important for each community. All analyses were performed using R.

Finally, spatial data from the traditional territories of each community were collected. The concept of traditional territory used here was the one presented by Paul Little, who defines traditional territory as “a collective effort of a social group to occupy, use, control and identify itself as a specific part of its biophysical environment making it their territory or homeland” (LITTLE, 2002, p. 253). The physical space of a group’s

territory can also be understood as its *Cosmogeography*, encompassing all possible property regimes, affective bonds, the history of occupation and the social use of the territory (LITTLE, 2006). To gather part of this information about the communities' traditional territories, we presented to each family a map with a high-resolution (5 meters) satellite image of the region. They were asked to point out (with a pen or the finger) the location of most used places for fishing, honey harvesting, leisure or resting, religious rituals (such as cemeteries) amongst other points of importance for local population. This method is called participatory mapping and it allowed the authors to see the traditional territories and if there was an overlap with the protected areas of the region (CHIARAVALLOTI, 2019)

### 3.2. Participants

In total, 54 interviews were conducted, being 35 from community 1 and 17 from community 2 (Figure 1). Priority was given to the eldest members of the communities (usually the heads of the Family). In this paper participants were identified by numbers (person 1, person 2 and person 3) followed by the identification of the community they belong to (community 1 or community 2). All participants of this study were informed about the purpose of the project. Interviews were either written or recorded, depending on the participant's preference. Interviews were carried out in two sets of one week each, during October and December of 2019. The study was approved by the ethics committee under the acceptance number CAE 31233814.2.0000.0021.

## 4. Results

### 4.1. Territory and changes on areas of use – Freedom

#### 4.1.1. Community 1:

Inside the protected area located in the southern side of the Western border (here named a reserve (as it is protected) despite of not being officially a RPPN) is the Baía Vermelha,. It was mentioned in all interviews as being an important area for fishing and gathering bait. It was stated that this bay is the best location for those activities because fish is guaranteed, in other words, the time and fuel invested is paid off. As one participant pointed out:

*“in my region, where I catch more is Baía Vermelha, there are others places where we go, but it is not as good”* (participant 01, community 1).

Considering the identified traditional territory (which includes areas of fishing, leisure and religion among other important locations), we identified an area of 57,995.13 hectares, 18,594.36 hectares (32.06%) from which are inside protected areas. (Figure 2).



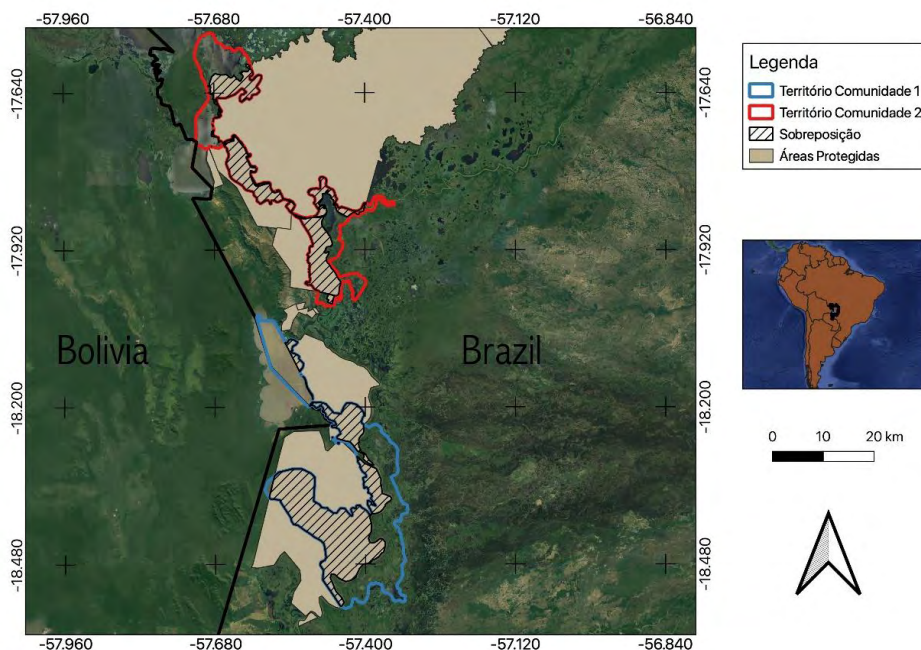
#### 4.1.2. Community 2:

As for community 2, the most used area is the “Boca do Moqué”m”. During the interviews, the residents mentioned that this is an area of extreme importance for the families’ survival. Alike the Baía vermelha, fish is “guaranteed”.

*“We fish at Moqué”m over there, just in front of the house. [Fish] there has been always guaranteed”*. (participant 09, community 2).

However, unfortunately this area is almost completely located inside protected areas. In that scope, considering all areas of fishing, leisure and religion among other important locations (considered here as a traditional territory) we identified an area of 35,652.29 hectares, from which 30,662.85 hectares (86%) are inside protected areas (part inside the reserve and part inside the RPPN) (Figure 2).

**Figure 2: Regions declared by communities 1 and 2 as being part of their traditional territory**



The map also highlights the part of the territory overlapping protected areas.

Source: authors

Comparatively, community 2 had significantly bigger impacts in its freedom than community 1 ( $p=0,00$ , intercept = 0.58). The analysis demonstrated that a resident

from community 2 has a chance of being restricted within its land use area (freedom) 78% higher than a resident from community 1.

## 4.2. Living areas changes – Safety

### 4.2.1. Community 1:

In community 1, two families (11%) said that they had to move due to the creation of protected areas (reserves). The impact was recorded by two different families. Both families were financially compensated by the owner of the area. One of the families, however, still feels that the displacement had a negative impact on family members:

*“there was a lot better, because we planted, we had manioc, corn and here we can’t plant, we just used this little piece you are seeing”. This island is very small”. (participant 18, community 1).*

The other Family gave another example where the conflict was more serious as the head of the Family worked for the reserve for a few years. After some disagreements about selling bait on the harbour of the preserved area, the owner did not allow the activity and therefore, did not want the family to continue living in the area. The family sued the landowner, who (through a judicial agreement) had to pay the property where the family lived. It is worth mentioning that in both cases conflicts related to safety involved only private entities.

### 4.2.2. Community 2:

At the community 2, residents reported that some people were forced to leave their original settlement because of the creation of protected areas. 15 families (86%) interviewed mentioned that they were expelled and did not have their rights preserved.

*“As soon as the reserve was created there, they told the everybody to get out. They burned the houses so people wouldn’t go back... my father and my mother put everything in a small canoe and we paddled until we got here, so we began to clean to build our house, during a rainy period, full of mosquitoes, February, it was in January, March and April that we finished cleaning. When we came back there, there was nothing left, all burnt, over. (participant 3, community 2)”*

*“They took everything, we had to leave in a little canoe. So, myself, my brother and my aunt were in a tiny canoe and we sank. In the middle of the bay. We could not save the dogs, the chicken, nothing. (participant 12, community 2)”*

In the case of community 2, the replacement initially involved public agents, during the creation of the Pantanal Matogrossense National Park. Later, during the creation of



the RPPNs on the park' surrounding areas, private agents were involved.

Comparatively, communities 1 and 2 suffered significantly different impacts as to their well-being pillar of safety ( $p = 0,00$ , intercept = 0.72). The analysis demonstrated that a resident from community 2 has a chance of being displaced 205% higher than a resident from community 1.

### 4.3. Fear to practice activities – Health and Safety

#### 4.3.1. Community 1:

In community 1, even though some families pointed out that it was allowed to fish inside the protected areas (both reserves and RPPNs) on the surroundings of the community, due to fear or apprehension caused by the inspections (mostly made by the employees who take care of these areas), 15 families (45%) said they had to change their fishing zone.

*“We are scared to go to the Baía Vermelha, we stick to a group and one stay vigilant. If the caretaker shows up to send us away we just say we won't do anything”.* (participant 25, community 1).

There is also a feeling of insecurity related to the creation of new reserves. Eight participants of this community (24%) reported that one local rancher intends to set aside part of his property a protected area, although they have given no details whether it will be a RPPN or a private farm informally considered a reserve. Local residents fear it may further limit fishing in an area often used by some of the local families.

#### 4.3.1. Community 2:

The way protected areas were implemented (both the RPPNs and the Pantanal Matogrossense National Park) in the surroundings of community 2 raise some discussions about the extent to which their rights were affected and the impact in the life of the communities. 14 (93%) of the 15 families interviewed, pointed out that they changed the location where they fish. One family was not comfortable in answering that question. The lack of space and freedom, which represents the pressure applied by the protected areas on their own territory, is mentioned several times and words like “squashed” and “locked” are often used to describe the pressure on the well-being of families from community 2.

*“The reserve squashed lot of people... my mom and my dad always talked about how they were squashed with the arrival of the reserve, there was no way to work, do you understand?”* (participant 9, community 2).

However, in this community, no one reported the fear of creating a new reserve in the area.

Comparatively, residents from community 2 are 11% more likely to suffer some kind of impact related to the fear and apprehension of practicing activities (health and

safety) than residents from community 1. Nevertheless, the difference was not significant ( $p=0.51$ , intercept = 0.11).

#### **4.4. The relation between communities and other stakeholders – Social relations**

##### **4.4.1. Community 1:**

After creating the reserve (protected area without the official status of a RPPN) in the surroundings of community 1, the owner of the area built a school for the local children which also provides workshops and training courses focused on alternative livelihoods (as handcrafting). The school is administrated through a public-private partnership (PPP) and there are no costs for the communities. However, initially residents were resistant to enrol their children because of a rumour about the school selling the students' organs to other countries. Afterwards families allowed the children to go to the school. In that sense, while these actions of the school are not directly linked to the safety of fishing in the protected areas, the presence of these projects interfered in the perception of the way some residents feel about the use of the area. They perceived the school as some kind of charity of the landowner.

##### **4.4.2. Community 2:**

As for community 2, the protected areas are perceived in two different ways (RPPNs and the National Park). The first one is that the park is able to support and aid families in times of need. Nevertheless, when it comes to the private reserves (RPPNs), although they are also Conservation Units, they tend to be perceived differently, associated to the figure of the manager: "The person 3 never talked to us. Disregards us, and never went to our area to talk to us. He never goes to the community". (*participant 2, community 2*)

One important fact regarding this community happened in November 2019: the authors of this paper were invited to participate in a public hearing about the conflict between the National Park and families from community 2. This hearing was the result of a process initiated by a local NGO, who contacted the Federal Prosecution Service in 2014 requesting the revision of the management plan of the Park, due to the prohibition of fishing at the buffer zone of the protected area.

After a 2-year evaluation, the judge determined that the Park should redo its management plan taking into account local people. Three years later, in the beginning of 2019, the new management plan allowing families from community 2 to use some areas of the buffer zone, was published by the administrators. Although the area allowed for usage is smaller than the one the community challenged, the management plan recognized the communities as traditional and allowed the activities of fishing and bait gathering in areas previously forbidden:

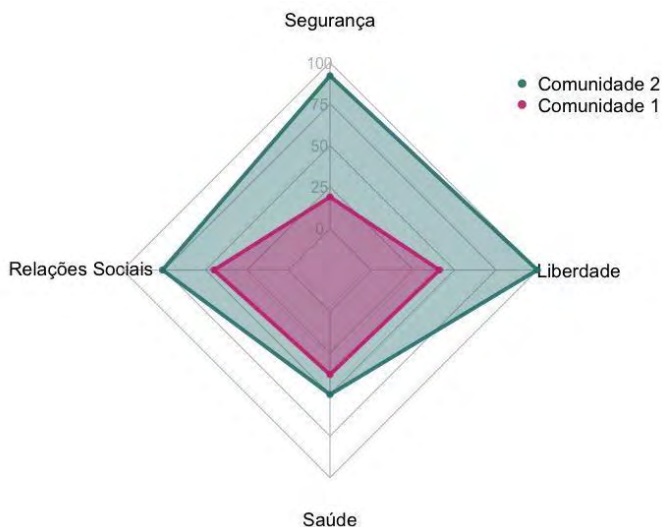
*“Now things are good for us, huh? Being able to work in peace, without having to run away, otherwise is difficult, right”? (participant 1, community 2)*

Comparatively, residents of community 2 are 36% more likely to have had changes into issues related to their social relationships than residents of community 1. Nevertheless, the difference was not significant ( $p=0.055$ , intercept = 0.31).

#### 4.5. Integrated Analysis

The integrated analysis demonstrates that the impact of creating protected areas was higher in community 2 for all 4 well-being pillars. However, a significant difference was only noticed for the freedom and safety pillars, where 92% and 100% of participants respectively mentioned suffering some kind of impact. On community 1, the social relationships were the most impacted pillar according to 45% of participants, followed by freedom and health, with 41% and 38% of participants respectively mentioning to have suffered some impact after the creation of the protected areas (Figure 3)

**Figur3: Diagram showing the importance of each pillar as to the assessment of negative impacts on communities 1 and 2**



Source: authors

#### 4.6. Positive comments about the protected areas

##### 4.6.1. Community 1:

At the community 1, several positive comments were made about the presence of the protected areas. In total, 32% of the families highlighted that the reserves brought

them some benefits. Some riverine were hired to work there, while others participated on workshops promoted by the owner of the reserve. It is worth mentioning the school was built by the landowner and today is seen as very important by some residents:

*“Nowadays I say that if they (my grandkids) had a way to continue to study there, they would. It was good, they were very well treated, never complained about a thing and they were taken to the city when they got sick. They are treated well to this day (participant 27, community 1).*

#### 4.6.2. Comunidade 2:

Positive comments were also identified in community 2. Alike community 1, 33.3% of people from community 2 mentioned something related to the presence of the protected areas in the region. As an example, the managers of the park are seen as an important support in cases of emergencies:

*“Then I said, this girl had fallen to the ground. So, twice he helped me when I needed, rescued and helped me” (participant 16, community 2) and “It’s nice, people from the park are nice to us. They never cast us aside and are always close, whenever we need they help us”. (participant 11, community 2).*

Comparatively, there were not significant differences between the communities related to the positive comments about the protected areas ( $p = 0,94$ , intercept = 0,01)

## 5. Discussion

Today there is a better understanding about the importance of local participation on the management of Protected Areas. Many communities come out from invisibility. In Brazil, for instance, there is three times more protected areas of sustainable use than strictly protection<sup>2</sup>. However, there are many places that still lack participation. The Western Border of the Pantanal, for many years, has seen this happening. During the creation of the protected areas in the region, the traditional communities were invisible to the decision-makers. As a consequence, the lack of access to public policies and the higher susceptibility to possible impacts related to the creation of protected areas emerged (SILVA, 2007). However, there was almost no information about this history and how communities currently interact with the protected areas. In this paper, through qualitative analyses focused on narratives, common knowledge, cultures and history as well as quantitative analysis, we aimed to uncover some of these aspects. . We also highlighted some of the positive aspects pointed out by the communities.

The resident of community 1 as well as residents of community 2 reported negative impacts related to the creation of protected areas in the region, mostly concerning freedom (eviction and relocation) and safety (as to restrictions on the fishing areas). In

2 - <https://antigo.mma.gov.br/areas-protetidas/cadastro-nacional-de-ucs/dados-consolidados.html>

community 2, these impacts were significantly more relevant, with almost all participants confirming they had to move from their home or change their usage area after the implementation of the protected areas. It is worth mentioning the violent way these restrictions were implemented. Destruction of houses, forced eviction, lack of dialogue, physical and emotional violence.

Many of these displacements were justified based on the possible lack of tradition from local people (CHIARAVALLOTI, 2019). This is mainly because ethnographic studies have shown that, in order to deal with the environmental unpredictability of the Pantanal, local people from the same community tend to share the idea that the territory where they live is a common good and only by helping each other they are able to survive. It is a system with no clear limits on the management of natural resources, focused on reciprocity, named “cooperative open access” (CHIARAVALLOTI; HOMEWOOD, DYBLE 2021). In other words, the complexities around the customary governance of natural resource in the Pantanal put local communities far labels aiming to identify traditional people in Brazil, which, as a consequence, open space for narratives which seek to argue against labelling them as a traditional group. However, regardless their similarities with other traditional groups, Pantaneiro riverine communities do identify themselves as a group with clear territories and, therefore, they would be under the safeguard of the National Policy on Traditional Peoples and Communities, having the right to stay in their territories (PIMENTEL, 2020).

Another aspect of the study refers to the different experiences related to the impact caused by the creation of protected areas on each community, even if they have many things in common as the ecosystem, life style, features of governance and social organization and similar livelihood (CHIARAVALLOTI; DYBLE, 2019). For community 2, the main impacts were related to freedom and safety while for community 1 they were related to social relationships and freedom, respectively. The first difference pertains to the protected areas’ status, bearing in mind that community 1 suffered the impact of an area that is not officially a Conservation Unit (albeit is managed as a protected area). On the other hand, community 1 was pressured by the creation of 4 Conservation Units (RPPNs and the National Park).

This diversity of situations (or historical background) interferes in the way the relationships among community, the managers and the area itself are established. Whether in the private reserves (RPPNs) or in the protected farm, the personification of the manager/owner of the area is very common (REZENDE, 2017). As both areas are private, the manager is perceived as the landowner and “the one who makes the rules” within the property, even if the owner is not physically there (in the case of RPPNs) or if the area is managed by an NGO (protected farm). This perception of the manager as the owner is linked to a conservative model where the communities are not included in the decision-making process. As a result, the idea that conservation measures require the separation of nature and society is consolidated, which directly contributes to the conflict evolution (IRVING, 2006). In practice, however, the way each “owner” manages the area is quite different. As to community 1, the management of the private area made

a connection promoting workshops or hiring some of the residents. On the contrary, in community 2 the private reserve is administrated by an NGO, until the data collection of this paper, avoided contact or interaction with the residents. In both cases, the local population is not viewed as a factor that can potentialize the conservation of the areas and consequently they do not participate on the decision-making process and often their opinion is not taken into account (PÁDUA; CHIARAVALLOTI, 2017). In other words, the lack of regulations on how a private reserve should be managed can lead to completely different paths regarding the communities' well-being. Despite that, as the park is a public asset, there is more space for dialogue and negotiation and community 2 together with the Public Prosecutors Office and a local NGO, requested the revision of the management model of the park. As a result, an increase of the territory area was granted, which would be unlikely in the case of a reserve or a private farm.

These results emphasize the need of implementing a participative management, offering the space for the communities to share their thoughts, meeting the needs of the communities (well-being) and the biodiversity, regardless of the category or management model of the protected areas (KOTSAKIS, 2010). When the claims of ethnical identity is brought into the discussion of protected areas, it is crucial to talk about the rights and duties of each party involved, increasing the interdisciplinarity of the environmental agenda through a public policy perspective (CREADO et al., 2008). As an example, even if communities occupy or use areas inside Strictly Protected Conservation Units there are tools to solve these issues such as a Commitment Agreement, enabling new arrangements of the use of resources (PINHA et al. 2015). The creation of Conservation Units that allow the overlapping of properties, such as the Sustainable Development Reserve (RDS) can be a solution. The Pantanal western border case shows that, the long-time with lack of dialogue and the usage of participative tools, it still resonates today leading to conflicts that are still not fully solved.

It is important to point out that local residents perceive protected areas as something positive. The National Park manager is viewed by some as a state agent who helps them if they need, and local actions promoted by the owner of a private area allow the children to get access to education. So, albeit protected areas negative impacts of communities' well-being, the importance of reserves are still acknowledged by local people. We believe that a more participative management would increase the proportion of positive aspects and the understanding that culturally differentiated groups together with area of great biological importance should be the engines of a sustainable development.

## 6. Conclusion

The assessment of the Pantanal western border communities' well-being brings important conclusion concerning the management of protected areas in Brazil. First, we highlight the importance of the recognition of traditional communities by the public authorities. As we demonstrated, it is not a question of simply having access to public policies, but a way to prevent impacts on these peoples' well-being. In this sense, it is essential that the decision-makers follow the National Policy for the Sustainable Development of

Traditional Peoples and Communities guidelines, so communities that perceive themselves as a culturally differentiated group can be recognized as such. Another important matter we discussed is the possibility of having clearer regulations for co-management inside private reserves, at least for those established as RPPNs by the government. As we demonstrated, public areas as the Pantanal Matogrossense National Park (Parque Nacional do Pantanal Mato-Grossense) are under constant public scrutiny, whether through the management council or the communication with other public entities as the Federal Prosecution Office. In that sense, there is more space for discussing the area management, as in the example of the Pantanal Matogrossense National Park, where the management plan was redone recognizing the surrounding communities as traditional and reducing the restrictions inside its traditional territory. The same is not true for private reserves. It would be essential that mechanisms like an administration council were implemented as a management tool for those areas.

### Acknowledgement

This Research was part of the Master Course of IPE - Institute of Ecological Research. The authors would like to thank the reviewers of the paper and the critical review of Thiago Pavan Betrame, and boat pilot Jocemir Antunes (Jaburu) – his presence was fundamental to the data collections. The authors are also thankful to the local communities and the local NGO ECOA who received the authors in the field.

### Referências

- ADAMS, William M.; HUTTON, Jon. People, parks and poverty: political ecology and biodiversity conservation. **Conservation and society**, v. 5, n. 2, p. 147-183, 2007.
- ANAYA, Felisa C.; ESPÍRITO-SANTO, Mário M. Protected areas and territorial exclusion of traditional communities. **Ecology and Society**, v. 23, n. 1, 2018.
- BONI, Valdete; QUARESMA, Sílvia Jurema. Aprendendo a entrevistar: como fazer entrevistas em Ciências Sociais. **Em Tese**, v. 2, n. 1, p. 68-80, 2005.
- CHIARAVALLOTI, R. M. Is the Pantanal a Pristine Place? Conflicts Related To the Conservation of the Pantanal. **Ambiente e Sociedade**. 19, 305–310, 2016.
- CHIARAVALLOTI, R. M. Overfishing or Over Reacting? Management of Fisheries in the Pantanal wetland, Brazil. **Conservation and Society**. 15, 111– 122, 2017.
- CHIARAVALLOTI, Rafael Morais. The Displacement of Insufficiently 'Traditional' Communities. **Conservation & Society**, v. 17, n. 2, p. 173-183, 2019.
- COLLOMB, Jean-Gaël E.; ALAVALAPATI, Janaki R.; FIK, Tim. Building a multidimensional wellbeing index for rural populations in northeastern Namibia. **Journal of Human Development**



and Capabilities, v. 13, n. 2, p. 227-246, 2012.

COUTO, E. A.; DIETZ, J.M.; MUNFORD, R. WTTWERBERG, G.B. **Sugestões para a Floresta** (IBDF)/UFViçosa, 1975.

CREADO, Eliana Santos Junqueira et al. Entre "tradicional" e "modernos": negociações de direitos em duas unidades de conservação da Amazônia brasileira. **Ambiente & Sociedade**, v. 11, n. 2, p. 255-271, 2008.

DIEGUES, Carlos Antonio. **As populações humanas em áreas naturais protegidas da Mata Atlântica**. Centro de Culturas Marítimas, Núcleo de Apoio à Pesquisa sobre Populações Humanas e Areas Umidas Brasileiras, Universidade de São Paulo, 1996.

FRANCO, J. L. A.; DRUMMOND, J. A. ; GENTILE, C. ; AZEVEDO, A. I. . **Biodiversidade e ocupação humana do Pantanal mato-grossense: conflitos e oportunidades**. 1. ed. Rio de Janeiro: Garamond, 2013. 260p

IRVING, Marta de Azevedo; MATOS, Karla. Gestão de parques nacionais no Brasil: projetando desafios para a implementação do Plano Nacional Estratégico de Áreas protegidas. **Floresta e Ambiente**, v. 13, n. 2, p. 89-96, 2006.

JUNK, Wolfgang J. et al. Biodiversity and its conservation in the Pantanal of Mato Grosso, Brazil. **Aquatic Sciences**, v. 68, n. 3, p. 278-309, 2006.

KOTSAKIS, Andreas. Community participation in biodiversity conservation: emerging localities of tension. In: PERRY-KESSARIS, Amanda (Ed.). **Law in the pursuit of development: principles into practice?** Routledge: Oxon, 2010. p. 131-145

LITTLE, Paul E. Territórios Sociais e Povos Tradicionais no Brasil: Por uma territorialidade antropológica. **Série Antropológica. Instituto de Ciências Sociais da Universidade de Brasília. Brasília**, 2002.

MANFROI, Miraíra Noal; MARINHO, Alcyane. Narrativas: caminhos do lazer que acontece nas tessituras de contar sobre o vivido. **Revista Brasileira de Estudos do Lazer**, v. 6, n. 3, p. 37-56, 2019.

MILLENNIUM ECOSYSTEM ASSESSMENT. Ecosystems and Human Well-being: Synthesis. Washington, DC: Island Press. 2005.

NEUMANN, R. P Nature-State-Territory: Towards a critical theorization of conservation enclosures. in Peet, R., Watts, M. **Liberation Ecologies: Environment, Development, Social Movements**. Routledge, 2004.p 195–217.

PADUA, Claudio Valladares; CHIARAVALLOTI, Rafael Morais. Pesquisa e conhecimento na gestão de unidades de conservação. **ECOS**, v. 2, p. 2, 2012.

PÁDUA, José Augusto. As bases teóricas da história ambiental. **Estudos avançados**, v. 24, n. 68, p. 81-101, 2010.

- PEIXOTO, JLS. A ocupação dos povos indígenas pré-coloniais nos grandes lagos do Pantanal sul-mato-grossense. Pontifícia Universidade Católica do Rio Grande do Sul. 250p. 2003
- PINHA, P. R, Noce, E. M. , CROSSA, M., AMORAS, A.S. Acordos Para Conservação Da Reserva Biológica Do Lago Piratuba. **Biodiversidade Brasileira**, v.5, n.1, p. 32–58. 2015
- SCHALLER, G.B., VASCONCELOS, J.M.C., Jaguar predation on capybara. *Z. Saeugetierk* v. 43, p. 296–301. 1978
- SILVA, Marina Osmarina. Saindo da invisibilidade—a política nacional de povos e comunidades tradicionais. **Inclusão social**, v. 2, n. 2, 2007.
- SIQUEIRA, A., SILVA, A., DE PAULA SILVA, Beatriz Lima. Áreas protegidas e populações tradicionais na fronteira Brasil/Bolívia. **Raega-O Espaço Geográfico em Análise**, v. 45, n. 1, p. 74-90, 2019.
- SNUC - Sistema Nacional de Unidades de Conservação; Lei 9.985 de 18 de julho de 2000; Ministério do Meio Ambiente.
- TOCANTINS, Nelly. Áreas Protegidas e Turismo, Estudo de Caso: Parque Nacional do Pantanal Matogrossense/ Mt E Seu Entorno. Universidade Federal de São Carlos, São Carlos, Brasil 2006. 170p
- TOMAS, W. M. et al. Sustainability agenda for the Pantanal wetland: perspectives on a collaborative Interface for science, policy, and decision-making. **Tropical Conservation Science**, v. 12, p. 1940082919872634, 2019
- TOMAS, W. et al. Borda Oeste do Pantanal e Maciço do Urucum em Corumbá, MS: área prioritária para conservação da biodiversidade. In: **Embrapa Pantanal-Artigo em anais de congresso. SIMPÓSIO SOBRE RECURSOS NATURAIS E SOCIOECONÔMICOS DO PANTANAL**, 5., 2010, Corumbá, MS. Anais... Corumbá: Embrapa Pantanal: UFMS; Campinas: ICS do Brasil, 2010. 1 CD-ROM SIMPAN 2010., 2010.
- WOODHOUSE, Emily; DE LANGE, E.; MILNER-GULLAND, E. J. Evaluating the impacts of conservation interventions on human wellbeing. **Guidance for practitioners. IIED, London**, 2015.

**Anita Valente da Costa**

✉ [anitavalentedacosta@gmail.com](mailto:anitavalentedacosta@gmail.com)

Submitted on: 21/03/2021

Accepted on: 14/05/2022  
2022;25e:00352

**Miraíra Noal Manfroi**

✉ [mirairamanfroi@gmail.com](mailto:mirairamanfroi@gmail.com)

ORCID: <https://orcid.org/0000-0003-0135-0697>

**Rafael Chiaravalloti**

✉ [r.chiaravalloti@ucl.ac.uk](mailto:r.chiaravalloti@ucl.ac.uk)

ORCID: <https://orcid.org/0000-0003-4271-3749>

# O Impacto das Áreas Protegidas Bem-estar das Comunidades Ribeirinhas Pantaneiras

Anita Valente da Costa  
Miraira Noal Manfroi  
Rafael Chiaravalloti

**Resumo:** A criação de áreas protegidas é um dos principais pilares da conservação da natureza. Estudos buscando uma compreensão mais abrangente da relação entre “bem-estar humano” e áreas protegidas são chave para um equilíbrio socioambiental dessas ações. O presente trabalho, através de entrevistas baseadas nos conceitos de liberdade, segurança, saúde e relações sociais, buscou avaliar o impacto da criação de áreas protegidas no Pantanal em duas comunidades ribeirinhas da região. Mostramos que ambas as comunidades sofreram impactos negativos no seu bem-estar. No entanto, as experiências sobre o impacto são expressas de forma diversa, compatível com o histórico, tipo de gestão e categoria de cada área protegida. Também mostramos falas positivas sobre as áreas protegidas, referentes à questão social, econômica e ambiental. Mecanismos mais abrangentes de avaliação da relação homem/natureza permitem entendermos os principais gargalos e potencialidades de uma conservação com efetiva participação das comunidades tradicionais.

São Paulo. Vol. 25, 2022

*Artigo Original*

**Palavras-chave:** Pantanal, comunidades tradicionais, áreas protegidas, bem-estar.

# El Impacto de las Áreas Protegidas en El Bienestar de Comunidades Ribeirinhas pantaneiras

Anita Valente da Costa  
Miraira Noal Manfroi  
Rafael Chiaravalloti

---

**Resumen:** La creación de áreas protegidas es uno de los principales pilares de la conservación de la naturaleza. Los estudios que buscan una comprensión más completa de la relación entre el “bienestar humano” y las áreas protegidas son clave para estas acciones. El trabajo, a través de entrevistas semiestructuradas basadas en los conceptos de libertad, seguridad, salud y relaciones sociales, buscó comprender cómo áreas protegidas en el Pantanal impactó la vida de dos comunidades ribereñas. Mostramos que ambas comunidades sufrieron impactos negativos en su bienestar. Sin embargo, las experiencias sobre el impacto se expresan de diferentes formas, compatibles con la historia, tipo de manejo y categoría de cada área protegida. Mostramos discursos positivos sobre áreas protegidas, referidos a temas sociales, económicos y ambientales. Mecanismos más completos sobre la relación hombre / naturaleza nos permiten comprender los principales obstáculos y el potencial para una conservación efectiva participación de las comunidades tradicionales.

São Paulo. Vol. 25, 2022

*Artículo Original*

**Palabras-clave:** Pantanal, comunidades tradicionales, áreas protegidas, bienestar