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Diverging development times: protection of environmental rights in Cufada Lagoons National Park, Guinea Bissau[1]

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Abstract. The protection of the environment and the promotion of human rights are increasingly seen as interconnected, complementary goals that share a core of common interests and objectives indispensable for sustainable development. Nonetheless, the complex interrelation of species in the semi-humid ecosystems of tropical latitudes is increasingly threatened by paths of economic development molded by the capitalist world economy. The creation of National Reserves and National Parks has often integrated sustainable management of natural resources and biodiversity conservation. Such is the case in Guinea Bissau, with regard to the creation of the Natural Park of Cufada Lagoons. This paper analyzes the external and internal pressures to biodiversity conservation of the Natural Park of Cufada Lagoons and the intersection between culture and sustainable management of natural resources.

Key words: sustainable management of natural resources, biodiversity conservation, national parks, environmental and human rights, Guinea Bissau.

1 Dissclaimer: the article shows the point of view of the author not the one of the organization for which she works. This article is part of research work conducing to a graduate thesis.

Tiempos de desarrollo divergentes: protección de derechos ambientales en el Parque Natural de las Lagunas de Cufada, Guinea Bissau

Resumen. La protección del ambiente y la promoción de los derechos humanos son metas consideradas cada vez más como interconectadas y complementarias. Comparten un núcleo de intereses y objetivos comunes, indispensable para el desarrollo sostenible. No obstante, la compleja interrelación entre especies en los ecosistemas semi-húmedos de las latitudes tropicales es cada vez más amenazada por las formas de desarrollo económico moldeadas por la economía capitalista mundial. La creación de reservas nacionales y parques nacionales ha integrado frecuentemente el manejo sostenible de los recursos naturales y la conservación de la biodiversidad. Este es el caso en Guinea Bissau y la creación del Parque Natural de las Lagunas de Cufada. El presente trabajo analiza las presiones internas y externas a la conservación de la diversidad en el Parque Natural de las Lagunas de Cufada y los efectos de la intersección entre cultura y manejo sostenibles.

Palabras clave: manejo sostenible de recursos naturales, conservación de la biodiversidad, parques nacionales, derechos ambientales y humanos, Guinea Bissau.

Tempos de desenvolvimento divergentes: proteção de direitos ambientais no Parque Natural das Lagoas de Cufada, Guiné-Bissau

Resumo. A proteção do ambiente e a promoção dos direitos humanos são objetivos considerados cada vez mais interligados e complementares. Compartilham um foco de interesses e objetivos comuns, essenciais para o desenvolvimento sustentável. Contudo, a complexa interrelação de espécies nos ecossistemas semi-úmidos das latitudes tropicais é a cada vez mais ameaçada pelas formas de desenvolvimento económico padronizadas pela economia capitalista mundial. A criação de reservas nacionais e parques nacionais têm integrado frequentemente o controle sustentável dos recursos naturais e a conservação da biodiversidade. Este é o caso da Guiné-Bissau e a criação do Parque Nacional das Lagoas de Cufada. O presente artigo analisa as vontades internas e externas da conservação da biodiversidade do Parque Natural das Lagoas de Cufada e a intersecção entre cultura e o controle sustentável dos recursos naturais.

Palavras-chave: controle sustentável dos recursos naturais, conservação da biodiversidade, Parque Nacional, direitos ambientais e humanos, Guiné-Bissau

Introduction

Development will be sustainable only if patterns of resource exploitation do not come into conflict with subsistence rights and biodiversity conservation. The complex interrelation of species in the semi-humid ecosystems of the tropical latitudes is increasingly threatened by paths of economic development molded by the capitalist world economy. The extraction of nonrenewable raw material, alteration of ecosystems, pollution, and climate change have been some of the multidimensional markers of economic growth in the space and time of contemporary capitalism. Socio-cultural and environmental losses have been justified for the sake of socio-economic development, globalization or modernization. Recent anthropological research on capitalism draws on a distinct analytical tradition. As Ong affirms (2006: 1), authors like Stephen Gill depict neoliberalism as an "epoch-marking order that relies on

the quasi legal restructuring of relationships between nation-state and transnational agencies" intertwined with a hegemonic notion of inevitable "progress" and social hierarchy associated with "market civilization" (Gill, 1996). For their part, Hardt and Negri talk about an emerging empire of globalized uniformity in labor regimes with a deterritorialized labor population (Hardt and Negri, 2000).

In this paper, I build on Ong (2006), who understands contemporary capitalism as "a migratory technology of governing that interacts with situated sets of elements and circumstances" that spreads "through the vectors it carves through the global marketplace of ideas and practices" (p. 5). This approach contrasts with a view that sees capitalism as a universal machine that shapes the world, and hence constantly pursues profits, monetary growth, and legitimacy. This paper looks at the interplay between the creation of national parks and the asymmetrical unfolding of forces of the capitalist world economy that forge nexuses among Guinea Bissau and international companies. This paper also aims to critically analyze the institutionalization of "conservation" through state enacted legal approaches. Sustainable management of natural resources and biodiversity conservation has been institutionalized in many cases with the creation of National Reserves and National Parks. Such has been the case in Guinea Bissau, a West African country with 36,125 km² of mudflats, mangroves, palm groves and savanna grasslands, where ocean and land blend, producing a wide diversity and abundance of natural resources.

Nonetheless, the creation of a legal framework for the protection of environmental rights and biodiversity conservation does not result in a positive outcome for conservation, environmental and human rights. Many anthropologists have described the creation of national parks and the conflicts they have generated among conservation institutions and local populations (McDermott, 2005; Temudo, 2009, 2012; Igoe, 2004; Walker and Peters 2007; Sodikoff, 2009). As Mc Dermott recalls in his paper on the Great Limpopo Conservation Area, in the 1990s, environmental organizations invented "new conservation territories" (2005:158). These zones often do not take into account the actual movements of people, animals, or water, but instead imprison communities in "heartland" "eco-regions" or "national parks." Thus conservationists —state agents, NGOs or aid practitioners— tend to fix local peoples' location and movement rights on a map by conjuring spaces and temporal scales (Appadurai, 1988; Tsing, 2000; Gupta, 1992). Furthermore, according to McDermott, "in common with states, environmental bodies increasingly exercise governmentality" (2005:159). A vast literature highlights how divergent knowledge, practices, perceptions, representations, and concerns about nature usually trigger conflicts among local populations and between local populations and external actors who wish to institutionalize conservation (Temudo, 2012; Sharpe, 1998; Igoe, 2004; Walker and Peters 2007; Sodikoff, 2009). The aim of the present work is to analyze the multiplicity of challenges (conflicting interests underpinning conservation, migratory pressures and the pressures of foreign companies) to which

subsistence rights and socio-cultural practices of local communities are exposed. The predicaments of conservation are analyzed by focusing on the consequences of institutionalization of conservation in terms of local ownership and current conservation practices. The present paper seeks to recapture the historical and cultural linkages between indigenous populations living in the Natural Park of Cufada Lagoons (PNLC)[2] and their territories and account for their conservation knowledge and practices. How do they co-habit with the national park norms and practices? What types of configurations are constantly enacted?

The case study that this article presents derives from fieldwork conducted from November 2011 to July 2014 in fourteen out of thirty three villages located in the PNCL as program coordinator of an international development organization in Guinea Bissau. The visits to the park were linked to the implementation of two main interventions: on one hand, a small project on improved stoves construction in five villages of the park, namely, Gã ture, Gamperto, Tebe, Cumambol, Bodjol Beafada (November 2011-November 2012); on the other hand, support to the participatory assessment of the internal regulation of the park with young volunteers from the villages of Tira Camisa and Lamane. The two projects also entailed visits to the villages of Lamane and Bacar Conte. The main methods employed in the field were direct observation, focus groups, informal talks and semi-structured interviews conducted in the above mentioned villages and in Buba from 2011 to 2014. My role as development worker for an international organization influenced the process of data collection. However, I used my experience as a form of auto-ethnography to draw some reflection on current conservation practices at PNLC and existing challenges.

Locating the Cufada Lagoons Natural Park (PNLC): whose natural wealth?

> "Se mato icaba i cansera pa tudu djintis
> Mato i no vida que no ta protegi.
> Tempo de guerra no bai busca refugio na floresta"[3]

"Esta historia é verdadeira porque naquele mato, naquela pedra, estão lá as mãos daqueles que fizeram juramento."[4]

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2 From now on, we will designate the Natural Park of Cufada Lagoons as PNCL (Parque Natural das Lagoas de Cufada).

3 "If the forest dies we are going to be all tired. The forest is our life that protects us. Even during the war time, we came to seek refuge in the forest" (Traditional healer, February, 2012).

4 "This story is true because in that forest, in that stone there are the hands of those that sweared" big man of Quinara (Abrantes, 2011:4).

The PNLC covers a surface of 89,000 ha and features an immense water reserve that fills up during the rainy season and then distributes water through three lagoons to the entire region. The PNLC is located in Southern Guinea-Bissau in the administrative region of Quinara, east and southeast sector of Fulacunda and north-eastern sector of Buba (see map 1).

Map 1. Location of the PNLC.

Source: IBAP, 2008.

The cities of Fulacunda and Buba are major population centers that belong to the park's northern (Fulacunda) and southern (Buba) borders. The park is home to three lagoons, one of which, Cufada Lagoons, is the largest freshwater body in the country. The park is restricted north and northeast by the Corubal River, east by the road connecting Buba to Quebo, south by the Great Buba River, and west by the Fulacunda River.

An estimated of 3,534 people live inside the national park in 33 small villages (*tabancas)*. The population belongs to a diversity of ethnic groups, namely: Beafada 30.8%, Balanta19.65%, Mandinga17.4%, Fula 3.6%, Manjaco 3.6% and Papel

2.6%. Other ethnic groups include Beijagos and Mancanhas (IBAP, 2008). The area of lagoons (Cufada, Badassa and Bionra) is one of the most biologically interesting regions of the country and represents the largest permanent freshwater body in West Africa. The national park is home to diverse flora and fauna with many species (e.g., chimpanzees) that are currently protected. An estimated of 203 species of birds, 53 species of mammals, and 11 species of reptiles inhabit the environment of the lagoons (2008). In addition to its domestic fauna, the PNLC is an important host for European migratory birds and ensures food security for neighbouring communities. The Great Buba River is known as an important nursing area for barracuda. This is the space in which the national park is located. But to understand the significance of that space and the value of its wealth, we have to meet the inhabitants of the national park, and hear their stories:

> Beafadas and Padjadincas were located in Gabu. It is there where Mandingas met them. Whoever says the opposite is lying and Mandingas do not dare to say that when they arrived Beafadas weren't there. Gabu is Beafada, Gabu is Padjadinca and Beafadas and Padjadincas are the same. Afterward Fulas came and had problems with Mandingas, and Beafadas started looking for land. They marched and marched and they were thirsty, with children and women crying. Then they saw a river. They put water in their mouths —*mangébei, mandjéba guê*! (beafada language). —"It is sweet!" Bádjéba, the Geba of white people. They continued toward Badora, a long cane of weapon given to Beafadas by the *irã* (cr.) to protect them from the war of Fulas. But Fulas came and chased Beafadas: some went to Cuor, others to Cossé. Cossé, Badora, Cuor, are all Beafada. At the time of the Portuguese, Cossé-Maru was the place where the Fula traditional chief used to kill cows to do his ceremonies and always offered the front leg to Beafadas. But more and more Fulas came and Beafadas headed south —Mampáta, Cacande, Bôfa (Beafada lands)—. And on the road towards the south, arriving to Mampáta, Fulas were already far away —*fooriéliba, iam ba foreana*! —"here we are going to rest"— from Forria. And Forria was Beafada, Colubuia, Tchémára, Catumbála, Buám, Cumbidjã, Beafada lands. One more time Fulas came and Beafada went away passing through the big river —*iam al ba iínara*! —"we are not moving from here" —Guinala"[5] (Abrantes, 2011:9-10).

As reported in the ethnographic work of Abrantes (2011), this is the story that big men and women (*homens grandi, mindjeris grandis*—creole language) would recall in Quinara when asked about the history of Beafadas. A story that revolved around some key images, a story without names of people but a story that tells the essential events about Beafadas and their territory, their shared identity with Padjadincas, the immense extension of Beafada's land and the consequent loss of that land following the arrival of the Mandingas, Fulas, and Soninqués. Quinara is a region of many different cultural groups: Beafadas, Papéis, Bijagos, Mancanhas, Manjacos, Fulas, Balantas; but they all considered it the land of Beafadas.

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5 Author's translation.

During an informal talk with elders of Lamane, they affirmed:

> We (Beafadas) owned all the land here. Beafadas know all the forests, all the stones of this land. This is the land of our elders (*no grandis* cr.). Then many people came, not only from here but also from neighboring countries because they all know this land is rich. Before Beafadas used to pour palm wine and sacrificed roosters, goats, pigs and cow in all sacred forests of Beafadas' land. Now some other people came and have their own ways, other Beafadas say their religion does not permit these things anymore. But this land is Beafada and our tradition is still here (personal interview, February 7th, 2012).

The elder of Lamane here refers to Beafadas' ownership of all Quinara and to the traditional practices of worshiping the spirit of the forests among Beafadas through ceremonies that inclue the pouring of palm wine and the sacrifice of animals. Subsequently, many other people came to occupy the land of Quinara, some from neighboring lands: Papéis, Bijagos, Mancanhas, Manjacos, Balantas; some from neighboring countries (mainly Guinee Conakry and Mali): Fula, Mandingas Soninqués, and they all brought their own traditions to the land of Beafadas. Some Beafadas also abandoned their ancient ceremonies, especially after the Islamization process that started in the second half of the 19th century.

Quinara is a patchwork of forest, mangrove, cashew trees, rice fields and villages. In the forest, with many different degrees of density, it is possible to encounter the following species of trees: *Azfelia africana, Detarium senegalense, Dialium guineense, Elaeis guineensis, Malacantha alnifolia, and Spondias mombin.* However, it is also a forest where the monoculture of cashew has also invaded the limits of the national park and has become part of its landscape. During one field visit to the village of Bacar Conte, I worked with one of the few local NGOs working in the PNLC to create awareness among the children about environmental rights (May, 2013). A group of 20 children of an estimated average age of eleven years was asked to define forest. The children started enumerating different tree species constituting forest: *poilon (Ceiba pentandra), cibis (Borassus aethiopium), pau de sangue (Pterocarpus erinaceus)* and also *caju* (*cashew*). The forest as depicted by these children also nourishes the meaning of its population's cosmogony and constitutes the roots of its history and the significance of their life, as detailed by Abrantes (2011:21):

> At that time when our people were looking for boundaries with the people of Xitole, they stepped on wetland. They were thirsty but they did not have anything to dig with. They took a stick, they hit the ground, they hit and hit. They hit the mud and in the soft mud water came out. That stick was *Bedasse* (Bedasse lagoon). They were two groups, the second drank and passed by and arrived in a place where water was coming out with force—*mambia páda fô gal* [beafada language], the water was coming out as a shoot—*guefáda* [beafada language], Cufada, the big lagoon […]. And that poilão (poilon (cr.) *Ceiba pentandra*) that was in Cufada where the water of the lagoon comes out, they tore

> it down and constructed a canoe; they brought people to drag it to the river but the canoe stood up and became poilão again. That is where Buba is located! [6]

In many groups of Guinea Bissau the linkages between elementary categories structuring social life are at the basis of the relationship between humans and natural species, thus defining a social continuity between nature and culture, founded on the attribution of human dispositions and social characteristics to natural beings. In the case of the Beafada, *ninki nanka* (the mythical snake) is considered the owner of the land where the Beafada live. In Mandinga *nìnkínankâ* is a spirit, an oracle with the shape of a snake (Giesing, 2007). In Quinara people talk about *irã*, the python that reaches the sea and becomes *ninkinanka*, when it gets as high as a palm tree (Abrantes, 2011). People in Quinara say that the *ninkinanka* is beautiful; it has a luxurious breast and long blond hair. Similarities can be found between the *ninkinanka* of Mandingas and Beafadas and the *elamundi* of Bijagos. "The term *elamundi* refers to the power that arises from an old python that went to live in the sea [...]. Every clan has an *elamundi*. The strenght of a clan is linked to its *elamundi*"[7] (Henry, 1994: 89).

This conception of life refers to the fact that the original common condition of both humans and animals is not animality, but rather humanity. Many animals, as well as other types of "non-human" beings, have a spiritual component which qualifies them as "people." This is the case of the so called *irã* (genius or spirit). During one field visit in Gã-Ture in March 2012, while waiting for all of the community to gather together, I was sitting in the shadow of one of the thatched houses and saw a piece of the lower jaw of a pig hanging on top of the door. When I asked the women living in the house, the meaning of that bone hanging above us, they explained, "this is our tradition; it's our way to protect each other. When you sacrifice an animal to the *irã*, he will protect your family and nobody will dare to do anything to you. *Irã* are powerful and if you don't respect them they will chase you. They are the ones that since ancient times have the power over this land and we have to ask them protection to maintain our strength" (informal talk, March 13th, 2012). Women referred to *irã* as entities that people cherish to ensure protection but also to ensure management of natural resources. In fact, people used to seek the approval of *irã* before cutting specific tree species and before allowing land use to people of another lineage (*djorçon*).

In the accounts of Abrantes on the deal celebrated between Beafada and the *ninkinanka* for the possession of Beafada's land, the linkages and power relations between spirits, nature and humans define the basis for social life as well as the sustainable management of natural resources:

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6 Author's translation.

7 Author's translation.

> A male *ninki-nanka* says, "I am the owner of this land; I am the owner of this soil." If I am the owner I can sell. The deal was done. A niece and a nephew were offered to the *ninki-nanka* and the land was bought. And if the snake was called Jiguba and the hunter Jan-Jan the land will be called Jiguba Indjiai as well as the colossal tree, or stone where the first encounter happened which will also be called Jiguba-Indjiai. The *blôm* is the stone or tree where the first encounter occurred where the descendants of Jan-Jan would pour palm wine and honey where they would sacrifice chickens, goats and cows for the Jiguba to help them manage the land that he sold to them[8] (Abrantes, 2011:23).

The fundamental role of the *irã*, as a totemic animal, to support the sustainable management of natural resources is explicit in this account. Sacrifices should be celebrated to obtain the spirit's support to manage the land. Many songs are dedicated to the spirits. It is Jiguba that people ask for a good harvest or to heal a sickness and it is Jiguba that people ask to close the land not to have any problems. Jiguba protects their land, heals the sicknesses and sends swarms of bees and snakes to those who do not respect his territory, to those that cut where it is forbidden.

Talking to the guards of the national park in different occasions, they mentioned that in ancient times, villagers commonly asked support from the *irã* against any possible danger that might threaten the forest. As one of the park guards told me

> If the population wanted to prevent anyone to cut their forest, they just poured some palm wine or rum (cana) and asked the *irã* to intervene. Immediately snakes, bees and all sort of dangerous and infesting animals would come out and the transgressors will run away. But now many converted to Islam and refuse to believe in these things (personal interview, Buba, May 14th, 2013).

When the sacred forest became a national park: itineraries of resource use and exploitation

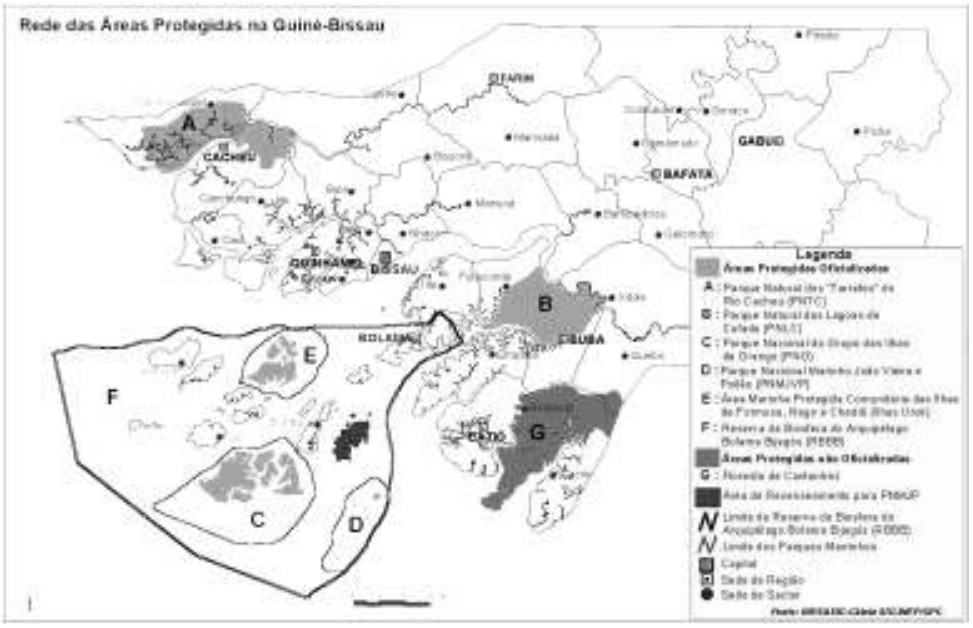
In Quinara all of the forests have a name. There is not one unified forest, but a plurality of forests, with their own names, their inhabitants, their different values and uses. Every forest, every savanna, every river is named and identified in a very detailed manner. A forest near a river can take the name of *ninkinanka* because the sacred python lives there with his family (Abrantes, 2011:57). Another forest is called after a particular *djina*[9] that was seen in that place.

After the National Park of Cantanhez, the PNLC is the richest in terms of dry and semi-dry forests; they cover 22,000 and 13,500 ha, respectively (IBAP,

8 Author's translation.

9 Djina is another sacred entity according to Beafadas.

2008). In addition, the park hosts important sub-humid forests. The biodiversity of Guinea-Bissau is also of global significance and the country is a signatory to major conventions (e.g. Convention on Biological Diversity) that reflect an international commitment to protect the environment. Development programs designed by the government, such as the Poverty Reduction Strategy Paper (MEPIR-DGP, 2011:54), in collaboration with the United Nations, highlight the need to support sustainable management of natural resources, and thus to constitute a clear national priority. Due to the importance of its lagoons, the PNLC enjoys the international status of a Ramsar Site (Ramsar Convention on Wetlands on areas of international importance) and is part of the National Network of Protected Areas (RENAP) (see map 2) covering a total area of approximately 470,000 ha under the responsibility of the Institute of Biodiversity and Protected Areas (IBAP). IBAP is a public institution working for the sustainable management of natural resources of protected areas and is supported by various donors (e.g. World Bank, European Union).



Map 2. National Network of Protected Areas (RENAP).

Source: IBAP 2008.

The RENAP was created to respond to the necessity to preserve the biodiversity of the country and to contribute to a sustainable socio-economic

development through a process of participatory management of natural resources. The Natural Park of Cufada Lagoons was created in 2000, through the Decree-Law No. 12 (2000). One of the objectives in creating the PNLC was to address the multiple pressures and threats to the habitats and ecosystems of the park (IBAP, 2008). These objectives directly refer to a commitment to protect the subsistence and environmental rights of the populations living on the grounds of the park. In 2008, the Foundation for Biodiversity ─Bioguiné─ stated: "the economy and survival of the majority of Guinea's population directly depend on the exploitation of biodiversity and natural resources" (Bioguiné, 2008), positioning environmental and socio-cultural rights of Guineans at the core of development discourse. Nonetheless, how did local populations inhabiting the premises of the PNLC participate in the formulation of the park's objectives? How did they align with the park's conservation strategy? To what extent is the international commitment of the Guinean state in terms of environment and human rights, able to guarantee effective environmental and socio-economic rights for the people living in the PNLC? How have people enacted environmental sustainability before and after the creation of the PNLC? According to statistics, 66.1% of the national population live in rural areas and at a macroeconomic level agriculture constitutes 57% of the GDP. The illiteracy rate is staggeringly high, with 56.28% of the adult population illiterate, 64.12% of women and 32.5% of men (MICS, 2010). In the PNLC, 42.92% of the population is illiterate (IBAP, 2008). Populations living in the PNLC have rarely heard about the national and international jurisdiction regarding environmental protection. Even the content of the regulatory measures of the park and its ten year management plan remains largely unknown and misunderstood despite the efforts of the PNLC. During a participatory appraisal of compliance to the internal regulations of the park, organized by the PNLC with young volunteers[10] in the villages[11] surrounding the Cufada Lagoon in June 2014, it emerged that confusion is in fact common regarding the development activities that the population can carry out and the areas in which they are allowed. According to the park's internal regulations (art 5, 6, 7, 8) (IBAP, 2010), the park is in fact divided in areas of integral protection, areas of transition and areas of sustainable development. Certain activities such as agriculture, construction of houses, schools and hospitals are allowed only in the sustainable development areas (art 8).

When asked about the different areas in which the park is divided the people from the villages who were interviewed said they were not aware of the limits of each area (figure 1—field work June-July 2014). In Cantanha, Mamadu D. said about this topic:

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10 Lamane were trained by the PNLC to carry out the participatory appraisal.

11 The villages where the participatory appraisal took place were: Cantanha (Cufada), Tira Camisa, Indjassane, Gã-Turé, Atche, Bani, Buba Tumbo.

> We are used to do *mpampam* (itinerary agriculture) but we don't know where the limits of the different areas of the park are and the national park should orient us. Before there were many species of birds in the lagoon, now fishes are scarce and we are eleven who fish in the lagoon. In ancient times we used to fish only once a year (personal interview, June 10th, 2014).

A more structured communication and sensitization strategy needs to be put in place to ensure the fulfillment of the park's regulations. Resting periods for the regeneration of species should also be clearly defined by the park regulatory documents. The last management plan of the PNLC 2008-18 refers to the participatory process through which the PNLC was created and to the vast consultation undertaken among villages. Nonetheless, very little is said about existent traditional mechanisms to support a sustainable management of natural resources. The management plan also fails to analyze how the PNLC's conservation priorities should be integrated into existing culturally sensitive methods of natural resource use and preservation. Additionally, the participatory process carried out at the moment of the park's creation did not maintain the same momentum in the subsequent years of the park's management and no periodic participatory review of the PNLC's management plan has ever been organized. What kind of tensions have surfaced between the park and its population and why? What are the disconnections and correspondences between them?

Tracing the story of the PNLC and its inhabitants will be fundamental to assemble some reflections about these questions. The significance of natural resources has been at the core of the local cosmogonies of the societies living in the PNLC since their settlement in Quinara. Historical events like Islamization, colonization and pressures of the capitalist world economy have shaped the relation between humans and nature over the years. The natural resources of the PNLC are sources of food security for the population living inside the park and of the entire region. Rice is produced in specific areas of the PNLC and provides the mainstay of the Guinean diet. The forest contributes to the socio-cultural economy of local communities as a source of food, energy, housing material, fiber, and traditional medicines (e.g., pharmaceuticals, aromatic oils, wild honey, rattan, etc.). Nonetheless, many factors converge to challenge the sustainable management of natural resources in the PNLC. Poor socio-economic infrastructures (such as schools and medical centers) and inadequate social protection mechanisms for the population living in the park also exacerbate the search for monetary gains necessary to satisfy the basic needs of the population. This creates a "*milieu* of transformation" (Ong, 2006: 5) in the making of calculative choices that sometimes infringes on both the park's norms as well as on the cultural practices of sustainable management that local populations have developed over centuries. With respect to the difficulties that populations living within the park endure in terms of basic human rights, Aminata M. an eighteen year

old girl from the village of Tebé affirmed: "here we (youth) can attend only primary education, nobody have the means nor transportation to go to High school which is only in Buba" (personal interview, March 12th, 2012). Tebé is a village situated in the Northern border of the PNLC that is very difficult to access. As it is an island in the middle of the sub-humid forest, it becomes completely isolated from the rest of the villages during the rainy season. Completely dependent on the surrounding natural resources to ensure food security and the proper functioning of its subsistence economy, the village organizes community voluntary work to rehabilitate roads, build houses and ensure that all useful social infrastructures are in place.

Figure 1. Community of Tebé rehabilitating the road before the rainy season, without any external support.

Paths of sustainable management of natural resources: internal and external challenges

The articulation of the traditional means of environmental preservation is as subtle and sensitive as the equilibrium of the living systems inhabiting the landscape of the lagoons. The forest is a sacred place for the local communities living in the PNLC. It is in the forest where long held and highly cherished traditions of socio-cultural

initiations are enacted and renewed. Through the forest, its entities and holy forces, the significance of life is permanently reaffirmed and cultural ties with the environment strengthened. The entire cosmogony of the population living in the PNLC refers to the forest as a fundamental space of life significance linking the communities' existence to the survival of a healthy environment and to the survival of its holy entities. Traditional mechanisms of sustainable management of natural resources are deeply linked to the culture of the communities living in the park and are related to two main traditional aspects: the power of traditional chiefs (i.e., Chief of the Holy Forest, Chief of the Lagoons) who have the responsibility of sustainably managing the environment and the belief in the "*irã*" or "snakes" whose permission is sought before using any natural resources (IBAP, 2008).

Access to natural resources is allowed only after "asking for permission" from traditional and holy entities with the necessary rituals and ceremonies. As Mamadu D. of Cufada states:

> Here if you have to construct a canoe, depending on the type of tree you will need for construction, you have to go to the *djagra* (traditional chief) who will ask permission to the *irã* to cut the tree that you need. You cannot just go and cut what you want without asking. But foreigners do not respect our traditions" (personal interview, June 10th, 2014).

When I asked which foreigners, Mamadu did not want to go in further details. He might have in mind people who settled in the area but were not originally from Quinara (internal migrants or migrants coming from neighbouring countries) or foreign companies that illegally log in the region.

The people of Quinara mention the importance and the sacred aspect of a "preliminary authorization." This reveals the deep consciousness that exists in local communities for whom sustainable management of natural resources depends on the holy connection with the entities of the forest and on strict control of the use of nature. Sanctions as severe as immediate death are foreseen for transgressors. Regulating the access to natural resources is therefore a deep concern of communities. Another traditional mechanism to protect nature is the identification of an entire lineage with an animal: there were people in Cufada whose sacred animal was the hippopotamus. Ceremonies were organized to ask for protection of the animal and to ensure its survival which was deeply linked to the survival of the lineage. Sitting with a group of women who were pounding palm fruit near the lagoon of Cufada (Cantanha), in June 2014 we tried to trace the last time that a hippopotamus was seen in the lagoon, a woman of middle age said:

> I remember around ten years ago a hippo died in the bridge constructed between Cufada (lagoon) and Corubal River, in the area close to Gã-Ture. The bridge is too small for that big animal to pass through, after that time we did not see hippos anymore. There was a lineage (*djorçon*) linked to the hippo here in Cufada but now I don't know if they still

> cherish the animal. Maybe if they start ceremonies again hippos will return (personal interview, June 12th, 2014).

The connection between a sacred animal and an entire lineage is so deep that the disappearance of one can determine the disappearance of the other. Hippos do not inhabit Cufada lagoons anymore[12] and the hippo lineage has also disappeared. Inhabitants of the national park also mention that the exploitation of natural resources was previously managed in an integrated manner: cutting of ancient trees was not admitted and fishing in the Cufada lagoon was allowed only once a year. Everyone would gather with their canoe in the lagoon and fishing would begin after huge celebrations and ceremonies enacted to reiterate the protection of the sacred entities of the forest. Mamadu D. of Cantanha recalled:

> In ancient times, fishing was organized only in May, all fishers would gather together and thank the *irã*, asking permission to fish abundantly in the lagoons. Ceremonies would take place all day long. Today only the village of Gã-Ture[13] has maintained the tradition of fishing only one time a year, in the month of May (focus group with community members of Cantanha, June 11th, 2014).

In ancient times, after fishing once a year, the rest of the year fish and birds were left in peace to accomplish their living cycles. Nowadays, fishing in the lagoon is a daily practice, eleven fishermen exploit the resources of the lagoon, five are residents and six are non-residents[14]. This represents a huge perturbation for fish, mammals, and birds living in the lagoon.

Nonetheless, many challenges exist to the maintenance of a socio-cultural organization based on a subsistence economy and the practice of traditional methods of sustainable resource management. Islamization, which started in the 19th century, resulted in the prohibition of the above-mentioned methods. The ceremonies enacted to call the intervention of the holy spirits (*irã*) are traditionally done through the pouring of palm wine or rum and these practices were strongly condemned by Islam. Many villages converted to Islam and abandoned those practices without substituting them with other conservation mechanisms.

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12 Access for hippopotamuses into Cufada lagoon is now very difficult due to the construction of the park's internal road in 2009. Rehabilitation of the entry corridors to the lagoon would be needed to grant hippopotamuses and other species access to the lagoons.

13 The participatory appraisal on the compliance to the PNLC internal regulation that took place in June 2014 revelaed that people of Gã-Ture are still fishing only in the month of May but using trawl nets that are not compliant with the park's regulations.

14 According to the internal regulation of the PNLC, only residents are granted the permission to do sustainable fishing in the lagoon.

The park also faces many challenges to ensure compliance with its norms and internal regulations. Insufficient human capital working for the management of the extended PNLC's area is another major challenge for national park protection. Strategies have been put in place to reach a lasting sustainability of the park but due to different constraints, this ultimate goal has not yet been achieved. Eco-tourism is identified in the management plan of the park (2008-18) as one possible factor that will support its best management practices; however the PNLC presently has no infrastructure to support this project. Visitors arriving at the PNLC, see only a small signboard that indicates its existence. There are neither controlled entrances nor other infrastructures that mark the borders of the park. Only eight guards (all men) are currently working to monitor the 89,000 ha of surface of the PNLC which represents one guard for more than 11,000 ha, a number largely inadequate to face the challenges of biodiversity conservation in such a vast area.

The socio-economic structure of the population living in the park reveals gender inequalities at different levels. High illiteracy rates of girls are registered in the villages of the PNLC but no women are featured in the park management bodies. In fact, no women feature in the park Direction or in the Management Council. The Management Council meets twice a year and deliberates on the management of PNLC (art 10, 11) (IBAP 2010). It is composed of 26 members, 13 are members of the villages of the park while 13 are state representatives (all of the 26 members are male). These asymmetries on access to education and management of the park's natural resources represent an additional challenge to the goal of sustainable management of natural resources. The exclusion of women from the decision making process of the sustainable use of natural resources is in fact a major obstacle to the achievement of this same goal. Women have a prominent role in the use and management of natural resources for the daily well-being of the family and secure transmission of fundamental knowledge about the traditional mechanisms of environmental protection. It is therefore of critical importance that this knowledge and wisdom inform and guide the management of the PNLC, and that women can equally voice their concerns and feature prominently in the decision making process of the park. Globally, the participation on the thirty-three villages in the management structure of the PNLC is quite weak in terms of decision making power enjoyed.

Since humans settled in these areas, local populations integrated themselves into the landscape that they encountered, developing sophisticated mechanisms of sustainable and long lasting management of the natural resources from which their living directly depended. A deep knowledge of the interdependency among species defined the local population of the current PNLC as one more ring of the living cycle that efficiently contributed to biodiversity. Nonetheless, nowadays different pressures divert local populations from sustainable conservation practices. Several conflicts occurred between the local communities and the PNLC's guards over the use and exploitation of natural resources. Some of the conflicts have involved com-

munity members attacking guards. This reveals the seriousness of the issues at stake. Community members are in fact contesting the norms of sustainable management of natural resources of the park. If systems are not put in place to ensure that the national park organically integrates community-based methods of conservation and if the communities' economy is not adequately supported, conflicts are likely to continue. There is therefore an urgent need to support dialogue and understanding among villages within the park and the management of the PNLC to ensure that all actors contribute to biodiversity conservation, sustainable development and respect of subsistence rights.

Market globalization is driving a trend towards the gradual monetization of services and of the economy of local populations, increasingly favoring aggressive practices of resource exploitation. Furthermore, climate change and price increases have had a negative impact on populations in a predominantly subsistence economy and this induces local communities to trade the wealth of the national park to compensate for the losses that they are experiencing. Agriculture practiced in large areas that allow grassy plains bereft of trees, indiscriminate woodcutting, hunting, fishing and the quick spread of cash crops are some of the consequences of the globalized market pressures. During a meeting with the community of Lamane in July 2013, a middle aged man stood up and explained:

> We have always done *mpampam* (itinerary agriculture). Before nobody used to have cashew fields (*horta de caju*) and our elders defined the places where we could do slash and burn. Generally the fields chosen for agriculture were those without ancestral trees. The surface was limited and the forest regenerated quickly. Now everybody cuts and burns the surface as they want. Sometimes the guards of the park come and complain about the extension of land used for agriculture but we don't know which areas we can use anymore (focus group, July 9, 2013).

Figure 2. Field burnt to practice agriculture in the area of integral protection of the Park, June 2014.

It is always striking to pass through fields that burnt to leave space for agriculture immediately before the rainy season (see figure 2). Nonetheless, in a paper analyzing environmental degradation in South Guinea Bissau, Temudo (2009) shows how authors like James Fairhead and Melissa Leach (1996;1998) were able to deconstruct, by means of social anthropology, the stereotype that, in the long term, small African farmers contribute to the deforestation of the continent. As Temudo (2009) highlights, "thanks to ethnographical analysis and historical research, they demonstrated on the contrary that an objective analysis of the evolution of the vegetal coverage highlighted that in many cases, farmers contributed to the enriching of landscape and forests" (239). In the case of the PNLC, the issues at stake are the increasingly vast areas dedicated to agriculture (rice and cashew) and the predicaments of appropriation of the park zoning and activities allowed in each zone —agriculture is not allowed in the areas of integral protection and the transitional zones— (IBAP, 2010). Cash crops such as cashew nuts are also increasingly supplanting the forest. Furthermore, the cashew monoculture is a threat to many species that are destroyed when natural forests and wetlands are cleared. On the one hand local populations are culturally and socially dependent on a healthy environment, on the other hand community practices increasingly concur with the perturbation of the park's ecosystems due to a lack of adequate support to practices of sustainable management of natural resources and access to social services.

Figure 3. View of Cufada lagoon.

The decreasing water level of the lagoons has been observed with concern (see figure 3). In June 2014, while conducting field visits and asking the villagers who live in the surrounding Cufada lagoons about the causes of the lowering of the level of the lagoons, responses converged on what Celeste M. of Tira Camisa affirmed:

> Agriculture developed closed to the margin of the lagoon and the difficult communication of the lagoon with the Great Buba river and the Corubal river due to the construction of small channels and bridges contribute to the decrease in the water level of the lagoon. The bridge of Atche [communication between the lagoon and the Great Buba River] is currently closed and water cannot pass through (personal interview, June 10, 2014).

The ecological role of the lagoon is compromised due to anthropic activities. The water level of the lagoon decreases and the land is taking over.

Migration from neighboring countries (e.g., Guinea and Mali) represents another way of illegally exploiting the natural resources of the park. According to the park's guards, many migrants start living inside the premises of the park with the support of the local population and employing natural resources in a non-sustainable way (indiscriminate hunting, fishing and wood cutting are some recurrent practices). Unfortunately, the PNLC has limited resources and infrastructures to ensure compliance with the protection of the park's biodiversity. Few guards are assigned to monitor the park and create awareness within the communities. Due to the above-mentioned economic pressures, resident populations and migrants increasingly exploit the forest resources to clear land for agricultural production, to produce firewood and charcoal as source of energy, and fell large trees for exportation. Furthermore, some logging companies that have settled in the area are making indiscriminate cuts that prove to be a threat to both communities and biodiversity. In the month of January of 2014 alone, in the village of Bacar Conte 116 trees were illegally cut with the consent of national authorities (see figure 4)[15]. Illegal logging is one of the manifestations of the state of exception and noncompliance with the national legal framework that the country endured during the transitional government following the military coup of April 2012. Even during election day, while Guineans were democratically voting, the past May 18th 2014, Gambian and Chinese companies were destroying the forest of the highly sensitive buffer zone of the sector of Fulacunda[16] taking advantage of the last day of the transitional government. Furthermore, during the transitional government the local authorities

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15 Logging licenses non-compliant with the legislation (Forestry law 2011, Decree-Law No. 12/2000) were issued by the central government after the military coup of April 2012. Local authorities and IBAP are without any effective power to stop the logging.

16 Presently, logging by Chinese and Gambian companies is also occurring in the sectors of Buba and Empada (Sambu, 2014).

of Quinara granted the military an estimated surface of 800 m^2, located inside the national park without knowledge of the National park's authorities. The area called "Military neighbour" was cleared by the military to construct a military camp. The Administrations of the park and of IBAP engaged in negotiations to try to recover the area.

Figure 4. During election day on May 18th 2014, illegal logging was occuring in the buffer zone of PNLC sector of Fulacunada.

Conclusions

The project of construction of the Buba harbour was initially the dream of the Portuguese colonial administration and secondly of the former Soviet Union. In 2008, this outdated dream was about to materialize thanks to a partnership between the governments of Guinea Bissau and Angola with an approximate investment of 61 million dollars, although non official figures talk about 360 million dollars (Salgado et al, 2009). The strategic position of Buba, its natural resources and the depth of the Great Buba River justify the choice of this site for such a project. President Nino Vieira enthusiastically presented the project as

> an opportunity for a better national integration thanks to the boost of production and the circulation of goods among the people of the east and south of the country on one hand and on the other hand an opportunity of sub-regional integration thanks to a better circulation of West African products (Vieira, 2008).

With neo-liberal enthusiasm the then chief of state was referring to a more hidden agenda of diverting the trade of goods that currently pass through the harbours of Dakar and Abidjan to Guinea Bissau. The concept of "global assemblage" (Collier and Ong, 2005) helps us understand the unstable constellation shaped by "interacting global forms and situated political regimes" (Ong, 2006:5) that in the case of Guinea Bissau reveals how neoliberal policies reconfigure power relations among different groups with respect to the dynamism of global markets and the making of calculative choices in an unfolding context. In the particular way in which contemporary capitalism operates in Guinea Bissau, the state is a fundamental player ensuring the strategy of governing and the forging and dismissing of priorities and alliances.

The construction of the Buba harbour is also intrinsically and contractually linked to the exploration of bauxite in the eastern region (Boé) of the country as well as the construction of a railway connecting Buba to Minhime for the transportation of bauxite. The Buba harbour (an area of 7,000 ha) was planned to be constructed inside the "core zone" of the PNLC that harbors the majority of biodiversity (flora and fauna). The contract by which the Government of Guinea-Bissau committed to this project is therefore illegal because it clearly violates Decree-Law No. 12 (2000) whereby the Natural Park of Cufada Lagoons was created. The project infringes on the national legislation related to environmental protection in multiple ways: allowing the destruction of important forest areas, creating an industrial harbour inside the park, and permitting extraction of bauxite without any environmental impact assessment.

In September 2007, the Ministry of Environment and Tourism of Guinea Bissau granted a 50 year license of extraction to the company Bauxite Angola S.A for exploration and commercialization of the mineral (Salgado *et al*, 2009). Therefore, the economic gains pompously proclaimed by the Guinean authorities in 2008, during the ceremony of inauguration of the Buba project are minimal for the state of Guinea Bissau. In reality, the Angolan company has the rights to 80% of the profits of the bauxite extracted and all rights to use the Buba Harbour for 25 years (Salgado *et al*, 2009). What economic development then is this project bringing to the people of Guinea Bissau? Even the prospect of new jobs for local communities from Buba Harbour is not credible. Huge demographic pressures will be exerted on the cities of Buba and Fulacunda due to the migration of professionals to work in the harbour. If the local population has any job opportunities, they will be low paid and unskilled work that will not change the current structural economic difficulties

of the region and may only contribute to their greater economic dependency while provoking huge socio-cultural losses. In fact, the construction of the Buba Harbour will entail the destruction of 51.7% of the sub-humid forest of the park with its extremely rich areas in terms of biodiversity, scientific research, and eco-tourism interest (Salgado *et al*, 2009). The extraction project as well as the construction of the Buba Harbour stalled because of the political crisis that occurred after the military coup of April 2012. Nonetheless, the transitional government in place after the coup of April 2012, endorsed the Buba Harbor project and mentioned that work would resume when funds became available. The political instability of the country and lack of funds postponed the Buba Harbour project, but the delay is only temporary. Integrated advocacy strategies are needed to ensure compliance with the national environmental and human rights legislation.

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The holy spirits of the sacred forest of Incassol and of the lagoons are said to be angry due to the constant destruction of the forest. The loss of traditional culture and knowledge of traditional approaches to sustainable management of natural resources are the huge consequences of conflicting paths of development. In fact, indigenous communities possess a distinctive culture which is articulated around a number of holy places (e.g. forest and lagoons) that are used for ceremonies and rites of initiation. Local communities dispose of a complex knowledge of regulatory measures to grant access to natural resources. Nonetheless, incredible external and internal pressures pose huge challenges to the survival of these community-driven models of sustainable development.

The case of the PNLC in Guinea Bissau reveals how legal frameworks alone do not secure compliance of environmental and human rights. States themselves often threaten environmental rights by illegally supporting aggressive natural resource exploitation and responding to neoliberal logics and "its promiscuous capacity to become entangled with diverse assemblages," as Ong puts it (2006:7). Furthermore, the creation of national parks relocates the decision making power from traditional institutions based on age division and rooted in the history of the communities inhabiting their territories, to hierarchical exogenous organizations of "forests guards" and "management committees" (Temudo, 2009:261). This paper has tried to analyze the predicaments of the coexistence of these two different systems which need to be addressed in a context of unequal access to social services, economic benefits, growing migratory pressures and pressures of logging companies whose unique interest is to trade the wealth of the national park to ensure monetary gains. It is therefore necessary to understand the social, cultural, and political constructions underpinning competition for natural resources in a context of protected areas. Supporting community, cultural and gender sensitive approaches to conservation is a key aspect of lasting sustainability. The issue of community

ownership of decision making processes in the context of protected areas is of fundamental importance for the persistence of biodiversity. Overlapping multiple systems of power without constant and integrated interrelation constitutes a deep risk in terms of disruption of socio-cultural norms and practices and open contestation (i.e. conflicts between the park and the population).

Regaining sustainability and a slower pace of life depends on cooperative and multidimensional approaches that will prove to be effective only if they are going to be participative and community driven. The participation of local villages in effective decision making regarding the management of the PNLC will be key to ensuring sustainable and lasting management of natural resources. Presently, the direction of the park is showing a strong will to overcome constant conflict with the local population fostering dialogue and participatory processes. A revision of the Management Council of the park will be foreseen to allow the inclusion of women in the only decision making instance of the management of the park which features the local population. However, vertical hierarchy is still the prominent way to operate in the management of the PNLC. More horizontal and inclusive, culturally and gender sensitive management structures should be experimented to foster local ownership of the PNLC and its ultimate survival. Better integration of population's conservation knowledge and practices into the park's regulatory measures should be foreseen to strengthen the active role of the local population in the process. The loss of biodiversity is also a cultural loss. People and nature are a continuum that can be harmoniously maintained only through understanding, supportive measures and sustainable ways of income generation.

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