

Calling for Democracy?

Responsive Forest Governance Initiative (RFGI) Research Programme

The Responsive Forest Governance Initiative (RFGI) is a research and training program, focusing on environmental governance in Africa. It is jointly managed by the Council for the Development of Social Sciences Research in Africa (CODESRIA), the International Union for the Conservation of Nature (IUCN) and the University of Illinois at Urbana Champaign (UIUC). It is funded by the Swedish International Development Agency (SIDA). The RFGI activities are focused on 12 countries: Burkina Faso, Cameroon, DR Congo, Ghana, Kenya, Mozambique, Nigeria, Senegal, South Africa, South Sudan, Tanzania, and Uganda. The initiative is also training young, in-country policy researchers in order to build an Africa-wide network of environmental governance analysts.

Nations worldwide have introduced decentralization reforms aspiring to make local government responsive and accountable to the needs and aspirations of citizens so as to improve equity, service delivery and resource management. Natural resources, especially forests, play an important role in these decentralizations since they provide local governments and local people with needed revenue, wealth, and subsistence. Responsive local governments can provide forest resource-dependent populations the flexibility they need to manage, adapt to and remain resilient in their changing environment. RFGI aims to enhance and help institutionalize widespread responsive and accountable local governance processes that reduce vulnerability, enhance local wellbeing, and improve forest management with a special focus on developing safeguards and guidelines to ensure fair and equitable implementation of the Reduced Emissions from Deforestation and Forest Degradation (REDD+) and climate-adaptation interventions.

REDD+ is a global Programme for disbursing funds, primarily to pay national governments of developing countries, to reduce forest carbon emission. REDD+ will require permanent local institutions that can integrate local needs with national and international objectives. The results from RFGI Africa research will be compared with results from collaborators in Asia and South America in order to enhance RFGI comparative scope, and to broaden its geographic policy relevance.

RFGI Working Paper Series Editors' Note

James Murombedzi, Jesse Ribot
and Gretchen Walters

Struggles for control over and access to nature and natural resources; struggles over land, forests, pastures and fisheries, are struggles for survival, self determination, and meaning. Natural resources are central to rural lives and livelihoods: they provide the material resources for survival, security, and freedom. To engage in the world requires assets that enable individuals, households, and communities to act in and on the world around them. The ability to accumulate assets and the ability to access government and market services depends partly on such resources along with the political-economic infrastructure – rights, recourse, representation, markets, and social services – that are the domain of government. Democracy, which both enables and requires the freedom to act, is predicated on these assets and infrastructures. Since the 1980s, African governments have been implementing local government decentralization reforms aimed at making local government more democratic by making them responsive and accountable to citizen needs and aspirations; in many places this has been done through a decentralisation of natural resource governance to local administrations. In order to be responsive to individual, household and community demands, local governments, too, need resources and decision-making powers. There must be a public domain – a set of public resources, such as forests or fisheries, which constitute this domain of democracy, the domain of decisions and services that citizens can demand of government. Natural resources, when decentralized into the domain of local authority, form an important part of the resources of individuals, households, communities and governments, making possible this move toward local democracy.

Natural resources provide local governments and people with wealth and subsistence. While nature is not the only source of rural income, the decentralization of natural resources governance is a core component of local government reform. However, governance reforms have been implemented in a context broadly characterized by an enduring crisis of the Western economic and financial systems, which in turn has stimulated privatization and liberalization in every sphere of life, including nature. The process has deprived local governments of public resources – depriving individuals and communities of a reason to engage, as a powerless government is not worth trying to influence. Privatization is depriving forest-dependent peoples of their access to formerly ‘public’ or traditionally managed resources. National governments, as well as international bodies such as the United Nations programme, titled the Reducing Emissions from Deforestation and forest Degradation (REDD), further this trend as they collaborate with private interests to promote the privatization of natural resources. The resulting enclosures threaten the wellbeing of resource-dependent populations and the viability of democratic reforms.

The specter of climate change is deepening the crisis of enclosure. A key response to climate change has been the attempt to mitigate greenhouse gas emissions through enhancing the capacity of forests in the developing world to store carbon, ostensibly for the benefit of the atmosphere as well as the communities who use these forests. UN REDD seeks to pay communities, through their national governments, to conserve their forests as carbon storage. A plus ‘+’ was added to REDD, forming REDD +, to call for improved ecosystems services, forest management, conservation, forest restoration and afforestation to enhance the capacity for carbon storage. Designed on the basis of similar payments for environmental services (PES) schemes, REDD+ has the potential to inject vast new sums of money into local resource use and governance. In the context of fragile local governments, nascent democracies and powerful private interests, such cash inflows result in the commercialization and privatization of forests and natural resources and the dispossession of local resource users. This financialization of natural resources grossly diminishes the scope for democratic natural resource governance schemes. To be sure, the implementation of REDD+ can also learn from and avoid the pitfalls experienced in these PES schemes, especially if they represent local interests in natural resource governance decision making.

The Responsive Forest Governance Initiative (RFGI) is an Africa-wide environmental-governance research and training program focusing on enabling responsive and accountable decentralization to strengthen the representation of forest-based rural people in local-government decision making. Since January

2012, the programme has carried out 33 case studies in 12 African countries, with comparative cases Nepal and Peru, to assess the conditions under which central authorities devolve forest management and use decisions to local government, and the conditions that enable local government to engage in sound, equitable and pro-poor forest management. Aimed at enabling local government to play an integrative role in rural development and natural resource management, these case studies are now being finalized and published to elicit public discourse and debate on local government and local democracy. This Working Paper series will publish the RFGI case studies as well as other comparative studies of decentralized natural resources governance in Africa and elsewhere that focus on the intersection between local democracy and natural resource management schemes. Using the concepts of institutional choice and recognition, the cases deal with a comprehensive range of issues in decentralized forest management in the context of REDD+, including the institutional choices of intervening agencies; the effects of such choices on accountability and representation; and the relationships between local government and other local institutions. The series will also include syntheses discussing the main findings of the RFGI research programme.

Based at CODESRIA, and funded by the Swedish International Development Agency (SIDA), the RFGI is a three year collaborative initiative of CODESRIA, the University of Illinois at Urbana-Champaign (UIUC) and the International Union for Conservation of Nature (IUCN). RFGI working papers and documents, including the background papers, the RFGI programme description, and the RFGI Methods Handbook, can be found on line at:

- <http://www.codesria.org/spip.php>,
- http://www.iucn.org/fr/propos/union/secretariat/bureaux/paco/programmes/paco_forest/thematiques_et_projets/gouvernance_and_iucn_tools/projets_en_cours/_programme_de_recherche__initiative_pour_la_gouvernance_democratique_des_forets/
- UIUC <http://sdep.beckman.illinois.edu/programs/democracyenvironment.aspx#RFGI>

RFGI Working Paper No. 7

RFGI Series Editors: James Murombedzi, Jesse Ribot and Gretchen Walters

Responsive Forest Governance Initiative (RFGI)

Supporting Resilient Forest Livelihoods
through Local Representation

Calling for Democracy?

**Villagers Experience of the Production of Class Relations
for Ecotourism and Carbon Markets in Niombato, Sénégal**

Rocio Hiraldo



© CODESRIA 2015

Council for the Development of Social Science Research in Africa
Avenue Cheikh Anta Diop, Angle Canal IV
BP 3304 Dakar, CP 18524, Senegal
Website: www.codesria.org

ISBN: 978-2-86978-621-9

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording or any information storage or retrieval system without prior permission from CODESRIA.

Typesetting: Alpha Ousmane Dia

Cover image: With permission from Marc Ribot for his *Ceramic Dog: Your Turn*
(2012 Northern Spy Records/Yellowbird Records)

Cover design: Ibrahima Fofana

Distributed in Africa by CODESRIA

Distributed elsewhere by African Books Collective, Oxford, UK

Website: www.africanbookscollective.com

The Council for the Development of Social Science Research in Africa (CODESRIA) is an independent organisation whose principal objectives are to facilitate research, promote research-based publishing and create multiple forums geared towards the exchange of views and information among African researchers. All these are aimed at reducing the fragmentation of research in the continent through the creation of thematic research networks that cut across linguistic and regional boundaries.

CODESRIA publishes *Africa Development*, the longest standing Africa based social science journal; *Afrika Zamani*, a journal of history; the *African Sociological Review*; the *African Journal of International Affairs*; *Africa Review of Books and the Journal of Higher Education in Africa*. The Council also co-publishes the *Africa Media Review*; *Identity, Culture and Politics: An Afro-Asian Dialogue*; *The African Anthropologist and the Afro-Arab Selections for Social Sciences*. The results of its research and other activities are also disseminated through its Working Paper Series, Green Book Series, Monograph Series, Book Series, Policy Briefs and the CODESRIA Bulletin. Select CODESRIA publications are also accessible online at www.codesria.org.

CODESRIA would like to express its gratitude to the Swedish International Development Cooperation Agency (SIDA), the International Development Research Centre (IDRC), the Ford Foundation, the Carnegie Corporation of New York (CCNY), the Norwegian Agency for Development Cooperation (NORAD), the Danish Agency for International Development (DANIDA), the French Ministry of Cooperation, the United Nations Development Programme (UNDP), the Netherlands Ministry of Foreign Affairs, the Rockefeller Foundation, the Open Society Foundations (OSFs), TrustAfrica, UNESCO, UN Women, the African Capacity Building Foundation (ACBF) and the Government of Senegal for supporting its research, training and publication programmes.

Contents

<i>About the Author</i>	x
<i>Acknowledgements</i>	xi
<i>Abstract</i>	xii
1. Introduction	1
2. What is the Problem with the Conservation-capitalism Nexus?	
Going Back to Marx	5
Research methods.....	6
3. Experiencing the Struggles to Produce Class Through Conservation in Niombato	9
Encountering the political through land expropriation	9
Controlling the production and redistribution of ecotourism services.....	12
Governing carbon credit production.....	13
Conclusion	17
<i>Notes</i>	19
<i>References</i>	21
<i>Annexe A: Open-ended questionnaires for villagers</i>	25
<i>Annexe B: List of institutional agents interviewed</i>	28

About the Author

Rocio Hiraldo is a PhD student at the School of International Development at the University of East Anglia, Norwich, UK.

Acknowledgements

I am indebted to a number of people who made this paper possible. I am especially grateful to Jesse Ribot for being a unique source of support since the initial steps of my research until the production of this paper. Thanks to the villagers of Sourou, Sipo, Dassilame Serere and Bani who took care of me while living there. I am also grateful to all the interviewees that gave their time to contribute to this research. Thanks to all researchers in the Responsive Forestry Governance Initiative (RFGI) for sharing their knowledge and views during our meetings. I am also very grateful to Bakary Doucouré, Papa Faye, Devanshi Chanchani and Harry Greateorex for their useful comments on an earlier draft and to my PhD colleagues who provided a pleasant atmosphere for the work. I would like to thank Jonathan Pattenden and Christian Lund whose suggestions, questions and comments on my PhD research have helped me put my thoughts in order when writing this paper. Finally, I thank the Swedish International Development Agency for its financial support to this research and the Council for the Development of Social Research in Africa (CODESRIA) and the University of Illinois for the creation of the RFGI programme. All mistakes in this paper are my responsibility.

Abstract

This paper argues that conservation projects are unlikely to improve equity and local community representation when driven by the imperative of capital accumulation. Based upon a case study of a tourism-oriented protected area and a mangrove reforestation carbon-offsetting project in Niombato, Senegal, the paper shows how these democratic deficits are related to the class relations that lie behind the conservation interventions here studied. To become a capitalist class and survive as such, conservation actors monopolize decisions about production, distribution and exchange through their local intermediaries, excluding most villagers while only engaging them through poorly rewarded wage-labour. This results in the emergence of inequalities and tensions in the relations between most villagers and those locals (state actors as well as villagers) acting on behalf of a distant capitalist class. While conservation projects are increasingly creating new spaces for capital accumulation that exclude the poorest, materially and politically, scholars concerned about the local democracy effects of conservation still remain inattentive to the class relations enabling the accumulation of capital.

Introduction

The argument that conservation projects are not improving the lives of the rural poor has long been supported by scholars and, as pressure for the expansion of carbon markets increases (Reyes, 2011), the thesis is being reinforced. Some scholars suggest that conservation projects, *inter alia*, those focused on forestry-related mitigation and ecotourism are not beneficial at the local level because they fail to improve local democracy and therefore the representation of local communities (Poteete and Ribot, 2011; Marfo et al., 2012; Ribot, 2012; Mustalahti and Rakotonarivo, 2014). The arguments given by these authors draw upon an extensive literature that analyses the local processes through which ability to benefit from resources (also called access) comes to be determined. By studying different cases of conservation, especially community-based conservation, these authors insist that access is better understood if, rather than focusing on property rights (i.e.: whether it is a community forest), we look at the power relations and political processes through which resources are appropriated and distributed (Ribot and Peluso, 2003). From this view, the rural poor and other marginalised groups in society (i.e.: women and migrants) will not necessarily benefit from forestry decentralisation reforms and community-based forms of forestry management (Ribot, 2002; Leach et al., 2003; Ribot and Oyono, 2006; Sikor and Nguyen, 2007; Bandiaky, 2008).

External institutional actors, such as project donors and central governments often resist local empowerment by using a wide range of formal and informal mechanisms through which they maintain or expand their ability to control decision-making processes at the local level (Poteete and Ribot, 2011). They often create custodians of power in parallel to the democratically elected authorities (local governments) by transferring resources and decision-making powers to unaccountable authorities such as village chiefs and customary authorities (Ribot et al., 2008). As a consequence, local governments, while holding formal political power, lack the powers to exercise authority and are therefore unable to be

responsive to their constituency. In addition, disempowered rural dwellers often lack the mechanisms to render local authorities accountable to them. In the context of spreading forestry-related climate change mitigation projects, it is necessary to go beyond a focus on local participation and make democratic representation (defined as a combination of responsiveness and downwards accountability) the main driver of these projects (Ribot, 2011; Ribot, 2012). Donors and those leading conservation projects should therefore choose local partners who respond to the needs and aspirations of the communities involved and provide them with sufficient financial and decision-making powers so they are able to be responsive to the people (Ribot, 2011). They should also ensure local communities have available mechanisms such as elections, monitoring and information through which to influence and sanction those leading forestry-related projects (Larson and Petkova, 2011; Marfo et al., 2012; Ribot, 2012; Mustalahti and Rakotonarivo, 2014). In turn the research should understand the mechanisms through which the relations between institutional actors and people are shaping local democratic representation and determining access to forestry resources and project benefits (Ribot, 2011).

Another group of authors problematise the inherent principle behind new forms of conservation capitalism (Bumpus and Liverman, 2008; Büscher et al., 2011; Sullivan, 2012). Conservation NGOs, philanthropic organisations, private companies and banks are increasingly promoting capital as the main way to save nature. Through ecotourism, carbon offsetting projects and other ecosystem service projects, nature conservation is becoming a new arena through which capital expands (Brockington and Igoe, 2006; Brockington and Duffy, 2010; Duffy, 2013). This process is taking place in different ways, inter alia through the creation of protected areas that ensure capital control of nature, partnerships with the state that provide a 'transnational capitalist class' with sovereignty and through the use of discourses that manufacture the success of this accumulation-driven forms of conservation (Brockington et al., 2008; Brockington and Duffy, 2010; Brockington and Scholfield, 2010; Igoe et al., 2010; Corson, 2011). Authors in this strand have shown the negative consequences of the conservation-capitalism nexus, especially by drawing on evidence about land expropriation for creation of tourism-oriented protected areas (Igoe and Croucher, 2007; Brockington et al., 2008; Corson, 2011; Kelly, 2011; Duffy 2012; Ojeda, 2012).

While both strands of the literature are attentive to the power relations in place, the first strand of the literature detaches capitalism from the analysis when considering the material and political implications of conservation projects. Should one be sceptical about the equity and redistribution potential

of accumulation-driven conservation projects or should it be thought that such potential is dependent upon the degree to which those projects enable democratic representation? This paper seeks to address this question by exploring the ways villagers are experiencing the transformation of two mangrove conservation projects into arenas for the production of capital (ecotourism services and carbon credits) in Niombato, Senegal.

Ecotourism started developing in the area through Bamboung, a community-based protected area for the 14 villages of Niombato created in 2003 by the NGO Oceanium with economic support from the French Global Environmental Fund (GEF). The NGO Oceanium is specialised in nature conservation and ecotourism and it is run by a popular Lebanese environmentalist who grew up in Senegal. It was previously co-managed by a Frenchman. Since Bamboung, the NGO Oceanium has created two other community-based protected areas in mangrove zones in the Southern region of Casamance. All of them are oriented to tourism and have a hotel where tours are organised around the mangrove and the terrestrial forests. Oceanium also has a diving centre for tourists in Dakar and sells tours around other national parks in the country and in the West African region.

Oceanium has also led the implementation of a mangrove reforestation project in Niombato and Casamance that provided the French food-products company Danone with carbon credits. In Niombato, mangroves were planted in the surroundings of Bamboung. This carbon offsetting project is part of CASCADE,¹ a multi-country programme led by the United Nations Environmental Programme that enables French companies to implement forestry-related Clean Development Mechanism (CDM) projects in former French colonies in West Africa (UNEP, 2012). CDM projects enable private companies from Annex I countries to earn carbon credits by implementing climate change mitigation projects (such as reforestation campaigns) in non-Annex I countries² that they can sell in global markets (UNFCCC, 1997).

The two cases studied here suggest that capitalism, due to its specific properties and to the political processes through which it is socially organised, promotes economic and political inequalities. To ensure capital accumulation, Oceanium and Danone have controlled decision-making processes about the production and revenue distribution of ecotourism services and carbon credits. They have done so indirectly, by operating through their local intermediaries who have mobilised labour-power and through state actors, who have provided them with sovereignty to operate. Thus, villagers have had to contend not only with their inability to influence decision-making processes, but also the inequalities between them and the local partner of Oceanium and Danone as well as state repression in

several instances. In spite of the fact that Oceanium and Danone's conservation programmes have shaped access to mangrove resources in different ways, the social relation that makes accumulation through conservation possible both in ecotourism and in carbon credit production is based upon the on-going exclusion of villagers from decisions about production, distribution and exchange in the conservation economy.

The next section reviews the ways scholars have problematised the connection between capitalism and conservation and provides a conceptual introduction to capitalism. The methods used in the research are then presented. This is followed by an analysis of the data collected. The last section concludes.

What is the Problem with the Conservation-Capitalism Nexus? Going Back to Marx

For many years scholars have shown that even when conservation is not oriented to the production and reproduction of capital, it has negative implications at the local level, resulting in the production of social and political inequalities and the marginalisation of the poor. What is then specific about capitalism that makes scholars sceptical about its connection with conservation? Authors in the second strand of the literature already described above provide some answers to this question. They suggest that the commercialisation and financialisation of nature constitute a spatial fix to current environmental crises and go hand in hand with discourses that nature can only be saved when there is an economic profit behind (Bumpus and Liverman, 2008; Brockington and Duffy, 2010; MacDonald, 2010; Pawliczek and Sullivan, 2011; Duffy, 2012). It is also argued that the conservation-capitalism nexus goes hand in hand with the development of political inequalities, increasing the political power of capital in decisions about conservation (Brockington and Duffy, 2010; Brockington and Scholfield, 2010; MacDonald, 2010; Büscher et al., 2011) while reproducing existing practices within conservation that negatively affect rural communities such as evictions and restrictions in natural resource use (Kelly, 2011; Corson, 2011; Benjaminsen and Bryceson, 2012; Ojeda, 2012) and unequal redistribution of resources (Duffy, 2012). In sum, the conservation-capitalism nexus is environmentally and politically problematic.

Marx's and Marxist concepts such as 'primitive accumulation' (Kelly, 2011; Corson, 2011; Sullivan, 2012), 'accumulation by dispossession' (Bumpus and Liverman, 2008; Corson, 2011; Benjaminsen and Bryceson, 2012) and 'hegemony' have already been used by these authors to describe the processes through which

capitalism expands through nature conservation. Nevertheless, Marx's theory of capitalism has been less explored in the conservation-capitalism literature. Rather than taking for granted what this mode of production cum social organisation of production is about, I provide here a brief conceptual introduction to the term with the hope of contributing to a better understanding of the processes studied in this paper.

Marx defined capitalism as a mode of *commodity production* that is characterised by the *imperative* of capital accumulation. He emphasised that, more importantly, capitalism is a social organisation of production (i.e.: it is not about speculating with land prices or a mere commodification of nature). It is based upon a social relation of exploitation and appropriation between the capitalist and workers called class. To make more money, the capitalist class buys means of production and labour-power in the market while producers make the commodities that he then appropriates in order to take the revenues from the sale of those commodities. The capitalist ensures accumulation of capital through the labour-time that is unpaid to producers, rewarding them instead with a wage that allows them to reproduce as a class of producers (Marx, 1976:643-673).

This class relation is not natural, rather it emerges out of a process of struggle that results in the control by the capitalist of the social organisation of production, distribution and exchange. The capitalist's decision-making powers are neither developed in isolation nor strictly derived from the economic needs of the working class. The state plays an active role in the production of class relations by permitting the direct expropriation of land from the producers by the capitalist (what has been called primitive accumulation), the maintenance of absolute private property for the capitalist and his control over production and appropriation (Marx, 1976:873-907; Wood, 1995:20-48).

Research methods

The research focused on the ways villagers have experienced and responded to the process through which conservation projects are transformed into arenas for capitalist production by looking at villagers' experiences of and responses to a) the creation of Bambang protected area and its transformation into a tourism site and b) the local implementation of the mangrove reforestation carbon offsetting project that has provided Danone with carbon credits.

While acknowledging that the class relation that forms the basis of capitalist production is historically embedded and forged beyond the realm of conservation (and its related economy), the research has focused on the ways villagers

experience mapping the processes through which private actors come to govern the production, distribution and exchange of ecotourism and carbon credits.

Primary data were collected between April and October 2012 and between November 2013 and March 2014 in five villages in Niombato called Sourou, Dassilame Serere, Bani, Nema Bah and Sipo. These are the five closest villages to Bamboung protected area. Population size in each of the four villages is small, ranging between 63 inhabitants in Sipo and 650 in Nema Bah and many of them do not have access to modern infrastructure. For instance, only Sourou and Bani have access to electricity and very few families can afford it. In addition, most households lack running water, relying on wells.

The research started with a literature review of institutional documents to study the formal alliances and networks supporting the production of ecotourism and carbon credits. To explore villagers' experiences of decision-making processes about ecotourism and carbon credits, 20 in-depth interviews and 60 open-ended questionnaires to villagers were conducted. The open-ended questionnaires were intended to map villagers' involvement in decision-making processes related to conservation, ecotourism and carbon credit production. The questionnaires studied their access to information about Bamboung and the carbon offsetting project, their relations with institutional agents involved in mangrove conservation and these projects, their perceptions about them as well as about the redistribution of benefits related to conservation, ecotourism and carbon credit production. The semi-structured interviews with villagers were intended to study in more detail their experiences and responses to their encounters with those leading conservation projects. Interviewees included 10 fishermen, 4 mollusk collectors, 4 workers in the protected area, villagers who participated in the management committee and villagers who participated in the reforestation campaigns.

To study the relations between institutional agents involved in ecotourism and carbon credits as well as their relations with villagers, thirteen semi-structured interviews were conducted with representatives from the state and non-state institutions involved in Bamboung protected area and the CASCADE carbon offsetting project. Interviewees included two members from the local government, two officials of the National Parks Service, two project officers from Oceanium, two project officers from the FIBA, a programme coordinator at the French Development agency, the coordinator of the CASCADE programme and one member from the Ministry of the Environment. These agents were asked to talk about the nature of their involvement in conservation, ecotourism, the carbon project and its related-decision-making processes, their relationship with other institutional agents as well as with villagers.

Experiencing the Struggles to Produce Class Through Conservation in Niombato

Encountering the political through land expropriation

Bamboung *bolong* (bolong being a diffuse network of mangrove channels) is well known in the Sine-Saloum delta for its productivity (Sow and Guillard, 2005; Albaret et al. 2007; Ecoutin et al., 2011). Before its closure, it attracted people from bigger villages in the delta (Joal, Mbour, Fimela, Missirah, Sokone, Bettenty, Djifer and Djirnda) who go there to fish and collect wood from the mangroves. However, unlike fishermen from other parts of the Delta, those from the villages studied lacked boats, nets and engines. In the five villages studied there were less than 20 boats and only five of them had engines. Indeed, at the time Bamboung bolong was open the number of villagers with boats was even fewer. Most villagers fished with a hook and a thread. They usually went there in groups of four or five, two or three times per week. They would attach to their waist an empty bag of rice which they filled with the fish collected. The catch was often very small (barely enough to fill one to two washing bowls) and so was the income earned through it (between 500 and 1000 CFA).

In October 2002 Oceanium suggested that the Bamboung bolong needed to be protected and presented the project to create a community-based protected wetland aimed at protecting biodiversity in the Bamboung bolong. The project was presented to the local government, the sub-prefect, the regional prefect and the presidents of several community-based organisations. The idea was well-received among members of the local government and 20 out of 20 councillors voted for the creation of this new space. This election resulted in the approval of the creation of a protected wetland of 6800 hectares of surface. The surface protected did not

only cover the 1800 hectares Bamboung bolong occupies, but also another 5000 hectares of terrestrial forest (Communauté Rurale de Toubacouta, 2002) that are today only used to provide touristic circuits.

Several months later a decree by the Ministry of the Environment and the Ministry of Fisheries was passed confirming the creation of Bamboung as a community-based protected area. The decree approved a one-year-ban on natural resource extractive activities within the surface of 6800 hectares of Bamboung, out of which 1800 are mangrove forest (RdS, 2003, Article 10). While it was approved at a higher level, the decree recognized the need for a local co-management after the one-year-ban. The decree stated that after the one-year-ban the conditions of access to mangrove resources would be fixed again collectively, by the local government, the management committee, community-based organisations and a scientific expert group, leading to an “integrated, community-based, participatory management plan” (RdS, 2003, Article 9). The rural council of Toubacouta, the management committee as well as other community and village organisations were recognized as the decision-makers of the new conditions of access to natural resources (RdS, 2003, Article, 5).

Image 1: Fieldwork area



Despite these statements, such participation did not take place and the conditions of access to the Bamboung bolong and the terrestrial forests in the protected area were largely determined by Oceanium and its local representative (who will be called Abdou in the bulk of this paper). In the questionnaires and interviews conducted villagers showed their discontent with the permanent closure of the bolong and the fact that they had all been told the ban on natural resource extractive activities would be temporary, lasting less than one year. Furthermore, none of them was ever asked for his opinion about the permanent closure.

When talking about their perceptions of the conservation rules villagers have suggested that at least mollusc collection could have been allowed since molluscs die once the season (December to May) is ended. In relation to fishing, opinions are varied, some would like the bolong to be open and others suggest that opening the bolong for fishing is risky not because of them, but due to the larger boats coming from other parts of the delta.

Villagers did not remain idle and tried to negotiate alternative solutions and open a dialogue about conservation rules in the bolong.. In one of the meetings of the management committee two fishermen expressed their disagreement with the fact that no alternative date was proposed for the ban on natural resource extractive activities. Since then, the fishermen have not been invited to the meetings of the participatory management committee (fishermen, pers. comm., 2012). Villagers went to visit different local authorities (including the local government, the sub-prefect and local officials from the National Fisheries Service) with a petition signed by around 500 villagers to say they wanted to continue fishing and mollusk collection in the Bamboung bolong. Mollusc collectors from Sipo together with fishermen from the villages studied also went to Fatick to talk to the regional authorities. However, they were unable to gain their support. When their agitation did not produce any change, villagers decided to give up their protests and go fishing and collecting molluscs in other less productive bolongs. However, in spite of the fact that their complaints have stopped, response from the questionnaires indicated that more than 90 per cent of villagers disagree with the fact that natural resource extractive activities continue to be banned in Bamboung.

In addition, villagers were made to abide by the regulations through sanctions. One of the fishermen who faced such sanctions described what happened to him and two other men from Sourou after they went fishing to Bamboung in July 2004:

'An armed man found us in Sipo [the village fishermen have to cross to come back after fishing in the Bamboung bolong]. He shot in the air and said that if we ran he would shoot us. He had a rope that he wanted to use to tie us up. I said I wasn't a slave and then he hit me with his weapon. They [Oceanium] took a lawyer to defend themselves but we are poor and do not have money for that. The co-manager of Oceanium came to our village to say sorry together with his lawyer and an agent from the National Parks Service. The lawyer said that in fact it was not the Director of National Parks who arrested us, but the local government [but this was a false claim]. He also said that if we did it again we would spend six months in prison (local fisherman, July, 2012).'

This response of the agents from the National Park Service has influenced the way villagers see them:

They [the National Parks Service] were never present, we have never seen them... we need them to regulate and to back us... we need them to be with us for our security...they never had meetings with people and should do things for citizens. For us they are not our enemies, but they have become so...³ they should be there for the population and not only for the project (local fisherman, June, 2012).

Controlling the production and redistribution of ecotourism services

The approval of Bamboung went hand in hand with the allocation of 20 million FCFA (30,490 euros) by the French GEF to Oceanium for the construction of a small hotel and the management of tourism activities in Bamboung (Communauté Rurale de Toubacouta, 2002). While in the Bamboung management plan Oceanium suggested that Keur Bamboung, the ecotourism hotel located in the protected area was intended to generate revenues to cover the costs of conservation (Goepf et al., 2006), the NGO used the hotel as an arena to accumulate capital.

The NGO started in an advantageous position by holding the capital provided by the French GEF to build the hotel, thus being able to hire villagers' labour-power. The NGO decided how many villagers would be employed as well as how much they would be paid (2500 F CFA per day, that is, 3.8 euros, although villagers did unpaid work for 2 years) and it appropriated the product of their labour by controlling the revenues generated through tourist visits in Bamboung. It did so through Abdou, appointed as project implementer, and making him responsible for the control of revenues generated through the hotel as well as paying villagers who worked as employees and guards in Bamboung. Despite the creation of the management committee and its existence until present, this participatory structure was not used to address the issue of production and appropriation of ecotourism.

Ecotourism in Bamboung led to other non-class (non-capitalist) sources of accumulation because those acting as intermediaries between Oceanium and villagers used their position to channel resources coming from Bamboung for their private economic interests. Abdou favoured his family members when choosing employees as well as food providers for the ecotourism hotel in Bamboung. His brother-in-law became manager of the ecotourism hotel and his brother, the employee supervisor. He also chose his wife as the only shopkeeper selling products in Bamboung. In addition, he used the name of other members of the committee without their information and consent to create an economic interest group

(GIE) (a kind of for-profit cooperative business) and generate additional funds that he never shared with other members of the committee.⁴ Hotel managers, who were collecting the hotel revenues and then sending them to Oceanium, also appropriated money from the hotel. Abdou's brother-in-law had to leave his post after Oceanium discovered he had taken money from the company for himself. In addition, in 2012 an employee of Oceanium who became the manager of the ecotourism hotel disappeared with a large sum of money coming from the hotel and was never seen again in the area. Workers did not react passively to these incidents. The current local councillor responsible for environmental conservation gave a brief account of workers' responses:

One day, they had a general assembly in Soucoutha⁵ to discuss the management of the ecotourism hotel. We went there, sat at the meeting, yet they had internal problems that they talked about in front of us, problems between the people who work there and the managers. The young employees revolted in front of us at the meeting and talked about the problems there, about the 'bad management', the low salaries, they argued that only one family was leading Bamboung [Abdou's family]...they insulted Abdou and we had to calm them down and told them they should not talk that way to an elder'.

Two of the employees who were part of this revolt had also written a letter to call for improved transparency and the end of private appropriation of the revenues generated through Bamboung. Since they did not receive any response, they decided to take drastic action and so, one day, they took a large sum of money from the till and demanded for improvement in remuneration from the managers. . As a punishment, these two members of the staff were finally fired by Abdou with authorisation from the local sub-prefecture.

The questionnaires and interviews conducted showed villagers do not feel they are benefitting from the Bamboung protected wetland. 88 per cent of villagers interviewed identified their own village as the most affected place by Bamboung and only 3 per cent of the interviewees identified their own village as the main beneficiary of the protected area. 58.33 per cent of interviewees identified Abdou, Abdou's village or Oceanium as the main beneficiaries of the protected wetland while 25 per cent of them identified the employees of the protected area as key beneficiaries.

Governing carbon credit production

As with services to eco-tourists, the production of carbon credits in Niombato has also been organised in class-ways, that is, through a class relation of exploitation

and appropriation where revenues are unequally distributed. The project consisted of 2 or 3 days of paid mangrove reforestation campaigns during each month of the rainy season. Villagers were paid 1.5 euros per day for planting mangrove seeds. In exchange Danone has earned a 30-year crediting period, meaning it has become entitled to sell the carbon dioxide that will be stored by the planted mangrove trees in the following 30 years.

As was previously the case, villagers only participated in the conservation project as labour-power and were unable to take part in decisions about the exchange that took place between them and Danone. They did not know that such exchange was actually taking place. None of the villagers who were interviewed knew that Danone would make profit through the reforestation campaigns they were doing. This however does not correspond with the UNFCCC project document where it is stated that:

‘44 percent of the people interviewed think that the reason why Danone finances the project is related to carbon credits or the reduction of the pollution emitted by their factories; 28 percent think that Danone finances climate change mitigation. The local populations realize that Danone can benefit from this project because it is a profitable project for the population and for the backer’ (UNFCCC, 2010).

As the local intermediaries for the hotel in Bamboung, Oceanium’s role as intermediary between Danone and villagers provided it with a non-class source of accumulation, project funding. In 2008, Danone contacted Oceanium to discuss the carbon offsetting project and then the French GEF, donor of the project, provided Oceanium with 3 million euros to implement the reforestation campaigns (UNFCCC, 2010). Despite ignoring the fact that their labour had been appropriated by Danone, interviewed villagers have suggested that they suspect those villagers who implement the project are benefitting more than them.

Danone also produced itself as a capitalist class in carbon credit production by instrumentalising central as well as local state institutions:

“the Senegalese Climate Change Committee [part of the central government], in its meeting purely dedicated to the review of the Oceanium mangrove restoration project and dated May 12, 2010, clearly asked the Orbeo representative, who presented the Project Design Document, for getting such an approval from any Communauté Rurale [rural council] benefitting from project activities. Based on that, Oceanium entered into specific discussions with each Communauté Rurale with an interest in obtaining such a green light. An agreement duly signed by both parties specifies the undertakings of each party while securing the transfer of the Emission Reductions (ERs) to Oceanium” (UNFCCC, 2010).

To be able to own carbon credits, CDM projects require validation by the UNFCCC (Yamin and Depledge, 2004). Relying on what they argue are environmental and social coherence standards, the UNFCCC validated Danone project (Livelihoods, 2012). This decision has important material, political and social implications as it enables Danone to appropriate a commodity it has not produced. In addition, the approval of this pilot project has been the green light for the expansion of 'carbon capital' (as Bumpus and Liverman, 2011 call it), leading to the creation of the Livelihoods fund, a joint initiative by Danone and other European private companies seeking to invest in carbon markets around the world (Livelihoods, 2013).

Conclusion

Going back to the question posed in the introduction of this paper, is there any scope for equity within conservation projects that are driven by the imperative of accumulation? By studying villagers' experiences of the transformation of mangrove conservation into an arena for capital accumulation in Niombato, this paper has shown the various ways in which conservation-related capitalism is problematic, which suggests the need to consider capitalism when studying the power relations that shape resource access and benefit distribution in conservation projects.

Firstly, this is due to the specific characteristics of this mode of production/social organisation of production as described by Marx (1976). Rather than being oriented towards representing villagers' voices and fostering equity, Oceanium and Danone focused on monopolising decisions about ecotourism and carbon credit production in order to ensure an unequal distribution of labour and revenues and therefore the imperative of accumulation that drives their conservation interventions. As a consequence, the benefits villagers got from conservation projects have been limited to a poor economic reward for their work. From this perspective, the vehicles through which the capitalist class ensures accumulation through conservation are not only through land expropriation and commodification of nature, as already shown by different authors (Corson, 2011; Kelly, 2011; Ojeda, 2012; Benjaminsen and Bryceson, 2012), but also by monopolising decision-making processes to fit their interests. More importantly the various political processes through which commodity production is organised into class relations and the poorest lose their ability to control decisions about natural resource use.

The paper has also shown that those processes are specific to each commodity. The transformation of Bamboing into a tourism area controlled by Oceanium went hand in hand with a monopolisation of decision-making processes by this NGO of conservation rules. Fishermen and mollusc collectors tried to open a dialogue to find alternative solutions but their claims were not heard. Restrictions in natural resource access became permanent not only through fake promises

of opening the bolong after less than a year, they were also enforced through repression (Peluso and Watts, 2001). In addition, villagers had to see how those who prevented them from working in Bamboung bolong appropriated ecotourism revenues. On the other hand, the production of carbon credits did not go hand in hand with a violent territorialisation strategy and involved the reforestation of mangroves, which converges with villagers' interests. However, this only happened because it was part of the process through which Danone accumulated capital. What both cases have in common is the inability of villagers to take part in decisions about who produces, who does not and who appropriates the revenue that their labour-power has generated.

The conservation-capitalism nexus is problematic in that it erodes villagers' relations with those who act on behalf of the capitalist class, including state actors and other villagers who act as local intermediaries. Villagers have therefore encountered the state not as a representative of their interests that can be influenced by their demands, but as a body that ignores them while supporting the interests of the capitalist class (i.e. land expropriators). At the same time, Oceanium and Danone have also delegated, to their local partners, the responsibility to monopolise decision-making processes, mobilise labour-power and carry out the expropriation of land and the appropriation of revenues. This has led to the development of local economic and political inequalities where Oceanium's local partner Abdou took an active role, using his position for his private economic and political gain (Pattenden, 2011), benefitting from other non-class (non capitalist) sources of accumulation.

The story here is not only about the incorporation of nature conservation into capital through NGO work (Brockington and Scholfield, 2010; Corson, 2011) and about the creation of a new spatial fix for current environmental crises generated by capital (for the case of Danone project) (Bumpus and Liverman, 2008; Büscher et al. 2011). More fundamentally, the history of ecotourism and carbon credit production here described is one about the creation of an economy that relies on the existence of a privileged minority who survives by benefitting from the labour of a working class majority. These findings suggest that while scholars are right in calling for equity and local representation within forestry-related projects, their claims are unlikely to be meaningful if they continue to ignore the imperative of accumulation that drives the production of these commodities and the social relations upon which profit is ensured.

Notes

1. In French CASCADE stands for Carbon Finance for Agriculture, Silviculture, Conservation and Action Against Deforestation.
2. The main officer of the local National Parks service was the one who arrested the three fishermen in Sipo.
3. In the interview Abdou did not provide such information
4. Abdou's village, also located in Niombato.

References

- Albaret, J.J., Simier, M. and Tito de Morais, L., 2005, 'Suivi biologique des peuplements de poissons d'une aire protégée en zone de mangrove: le bolong de Bamboung (Sine-Saloum, Sénégal)'. *Rapport final de la Convention particulière*, Vol. 3, Dakar: IRD.
- Bandiak S. 2008, 'Gender Inequality in Malidino Biodiversity Community-Based Forest Reserve: Political parties and the Village Approach', *Conservation and Society*, Vol. 6, No.1, pp. 62-73.
- Benjaminson T.A. and Bryceson I., 2012, 'The Conservation, green/blue grabbing and accumulation by dispossession in Tanzania', *Journal of Peasant Studies*, Vol. 39, No. 2, pp. 335–355.
- Brockington D., Duffy R. and Igoe J., 2008, *Nature unbound: conservation, capitalism and the future of protected areas*, London: Earthscan.
- Brockington, D. and Duffy, R., 2010, 'Conservation and Capitalism: an Introduction', *Antipode*, Vol. 42, No. 3, pp. 469-484.
- Brockington D. and Scholfield K., 2010, 'The conservationist mode of production and conservation NGOs in sub-Saharan Africa', *Antipode*, Vol. 42, No. 3, pp. 551-575.
- Bumpus A.G. and Liverman D.M., 2008, 'Accumulation by Decarbonization and the Governance of Carbon Offsets', *Economic Geography*, Vol. 84, No. 2, pp. 127-155.
- Bumpus A.G. and Liverman D.M., 2011, 'Offsets, greenhouse gas reductions and sustainable development', in R. Peet, P. Robins and M.J. Watts, eds., *Global Political Ecology*, New York: Routledge.
- Büscher, B., Sullivan S., Neves K., Igoe J. and Brockington D., 2012, 'Towards a Synthesized Critique of Neoliberal Biodiversity Conservation', *Capitalism Nature Socialism*, Vol. 23, No. 2, pp. 4-30.
- Communauté Rurale de Toubacouta, 2002, 'Procès Verbal de Délibération N° 6 du Conseil Rural de Toubacouta en date 10 Octobre 2002' (Minutes report of deliberation no. 6 by Toubacouta Rural Council, date 10 October 2002), 10 October 2002, Toubacouta, Republic of Senegal.
- Corson C., 2011, 'Territorialization, enclosure and neoliberalism: non-state influence in struggles over Madagascar's forests', *Journal of Peasant Studies*, Vol. 38, No. 4, pp. 703–726.
- Duffy, 2012, 'The international political economy of tourism and the neoliberalisation of nature: Challenges posed by selling close interactions with animals', *Review of International Political Economy*, Vol 1., pp. 1-22.

- Ecoutin J.M., Simier M., Laë R., Sadio O., Bertrand G., Raffray J., Tito de Morais L. and Albaret J.J., 2011, 'Efficacité d'une Aire Marine Protégée, l'exemple du Bolon de Bamboung (Sine Saloum, Sénégal)', available online at http://spcsrcp.org/medias/csrp/projets/AmpCogestion/etat_de_lart/Communication_n9_EfficaciteBBG_AMPHORE_Ecoutin.pdf.
- Fairhead J., Leach M. and Scoones I., 2012. Green Grabbing: a new appropriation of nature?, *Journal of Peasant Studies*, Vol. 39, N°2, pp. 237-261.
- Gardner B., 2012, 'Tourism and the politics of the global land grab in Tanzania: markets, appropriation and recognition' *Journal of Peasant Studies*, Vol. 39., No. 2, pp-377-402.
- Goepp J., Diame I., Diame A., Ndaw E.H., Emeritt P., Sonko Y., La Valle, A., 2006, 'Plan de gestion de l'aire marine communautaire du Bamboung', Dakar : Oceanium, *unpublished paper*.
- Igoe J. and Croucher B., 2007, 'Conservation, commerce and communities', *Conservation and Society*, Vol. 5, No. 4, pp. 534-561.
- Igoe J., Neves K. and Brockington D., 2010, 'A spectacular eco-tour around the historic bloc: theorising the convergence of biodiversity conservation and capitalist exploitation', *Antipode*, Vol. 42, No. 3, pp. 486-512.
- Kelly A.B., 2011, 'Conservation practice as primitive accumulation', *Journal of Peasant Studies*, Vol. 38, No.4, pp. 683-701.
- Larson, A. M., and Petkova, E., 2011, 'An introduction to forest governance, people and REDD+ in Latin America: Obstacles and opportunities', *Forests*, Vol. 2, pp. 86–111.
- Leach M., Mearns R., Scoones I., 1999, 'Environmental Entitlements: Dynamics and Institutions in Community-Based Natural Resource Management', *World Development*, Vol. 27, No. 2, pp. 225–247.
- Livelihoods, 2013, 'The Livelihoods project of restoration of mangroves in Senegal validated by the United Nations' available online at: <http://www.livelihoods.eu/archive/2012/07/10/the-livelihoods-project-of-restoration-of-mangroves-in-senegal.html>, 4th February 2013.
- Marx, K., 1976, *Capital* Volume 1, London: Penguin Books.
- MacDonald, K.I. 2010, 'The devil is in the (bio)diversity: Private sector "engagement" and the restructuring of biodiversity conservation', *Antipode*, Vol. 42, No.3, pp. 513–550.
- Marx K., 1976, *Capital*, Vol. 1, London: Penguin books.
- Mustalahti I. and Rakotonarivo O.S., 'REDD+ and Empowered Deliberative Democracy: Learning from Tanzania', *World Development*, Vol. 59, pp. 199-211.
- Pattenden, 2011, 'Gatekeeping as Accumulation and Domination: Decentralisation and Class Relations in Rural South India', *Journal of agrarian change*, vol.11(2), pp. 164–194.
- Ojeda, 2012, 'Green pretexts: Ecotourism, neoliberal conservation and land grabbing in Tayrona National Natural Park, Colombia', *Journal of Peasant Studies*, Vol. 39, No.2, pp.357-375.
- Peluso, N.L. and Watts M., 2001, *Violent environments*, Ithaca: Cornell University Press.
- Pawliczek J. and Sullivan S., 2011, 'Conservation and concealment in SpeciesBanking.com, US: An analysis of neoliberal performance in the species offsetting service industry', *Environmental Conservation*, Vol. 38, No.4, pp.435–444.
- Poteete A.R. and Ribot J. 2011, 'Repertoires of Domination: Decentralisation as Process in Botswana and Senegal', *World Development*, Vol. 39, No. 3, pp. 439–449.

- République du Sénégal (RdS), 2003, 'Réglement Intérieur de l'Aire Marine Protégée du Bamboung' (Internal Regulation of the Bamboung Protected Wetland), 2ⁿ April 2003. Dakar: Republic of Senegal.
- Reyes O., 2011, 'Zombie Carbon and Sectoral Market Mechanisms', *Capitalism, Nature, Socialism*, Vol. 22(4), pp. 117-135.
- Ribot J.C., 2002, 'African Decentralization: Local Actors, Powers and Accountability', *Democracy and Human Rights Working Paper series*, Vol. 8, Geneva: UNRISD.
- Ribot, J.C. and Peluso N.L., 2003, 'A Theory of Access', *Rural Sociology*, Vol. 68, No.2, pp. 153–81.
- Ribot J.C, Chhatre A. and Lankina T. V., 2008, 'Introduction: Institutional Choice and Recognition in the Formation and Consolidation of Local Democracy', *Conservation and Society*, Vol. 6, No. 1, pp. 1-11.
- Ribot, J.C., 2011, 'Responsive Forest Governance Initiative (RFGI): Supporting resilient livelihoods through local representation. Project summary introduction', available from http://www.codesria.org/IMG/pdf/RFGI_Summary.pdf
- Ribot, J.C., 2012, 'Seeing REDD for local democracy. A call for democracy standards'. REDD Editorial Essay, available from <http://www.icarus.info/wp-content/uploads/2011/02/Ribot-2011-REDD-Editorial.pdf>
- Sow I. and Guillard J., 2005, 'Etude de l'Aire Marine Protégée du bolong Bamboung (Sénégal) par hydroacoustique', Dakar:IRD.
- Sullivan S., 2012, 'Banking Nature? The Spectacular Financialisation of Environmental Conservation', *Antipode*, Vol. 45, No. 1, pp 198–217.
- Tienhaara K., 2012, 'The potential perils of forest carbon contracts for developing countries: cases from Africa', *The Journal of Peasant Studies*, Vol. 39, No. 2, pp. 551–572.
- UNEP, 2012, 'Carbon Finance for Agriculture, Silviculture, Conservation and Action Against Deforestation (CASCADE)', available online at <http://www.unep.org/energy/Activities/CASCADE/tabid/79470/Default.aspx>.
- UNFCCC, 1997, *Kyoto Protocol to the United Nations Framework Convention on Climate Change*" (<http://unfccc.int/resource/docs/convkp/kpeng.pdf>). 5 July 2010
- UNFCCC, 2010, Clean Development Mechanism, Project Design Form for A/R CDM project activities (CDM-AR-PDD), available online at http://cdm.unfccc.int/filestorage/2/O/G/2OG4ZAT0X7CFSP1N95HKDUQ83J6MRI/PDD_form03_v05_Sample%20PDD%20accompanying%20new%20meth%20for%20tidal%20forests%20-%2021January2011.pdf?t=OVV8bWg4eXQ3fDCkk194k700Go1_ASH0-M3S. February 2012.
- Wood E.M., 1995. *Democracy against capitalism: renewing historical materialism*, Cambridge: Cambridge University Press.
- Yamin, F. and Depledge, J., 2004. *The International Climate Change Regime: a Guide to Rules, Institutions and Procedures*. Cambridge. Cambridge University Press.

Annexe A

Open-ended questionnaires for villagers

Name:.....

Sex:.....

Village:.....

Occupation (of adults in the household):.....

Number of people in the household:.....

1. Please, describe how the following institutions represent your interests and why.

Institution	Description	Score according to such description (from 0 to 10)	Knowledge of its existence (Yes/No)
Central government			
Local government			
Village chief			
OCEANIUM			
Direction of National Parks			
Fishing Service			
FIBA			
AFD			
Danone			

2. In general, how would you characterize the participation of most households in your village within the management of mangrove resources in the area? (Leave the question open ended and after try to select the option that matches best the answer. Include additional ones if needed)
 - A. We just follow the rules of forest protection
 - B. We participate in mangrove reforestation campaigns
 - C. We participate actively in the creation of rules around mangrove conservation and in changing them if necessary
 - D. Other
3. When development projects choose local partners in your village do they tend to choose the same people?
4. Are these villagers better-off than the rest of the village?
5. How do these villagers represent your interests?
6. Why do they represent well/bad your interests?
7. Are there members of your village who express more their views to local authorities or in village meetings than others? Who are these individuals? (Open ended question, then I will code).
8. Do all villagers equally benefit from development projects coming to your village? If not, who benefits the most?
9. If you disagree with any political decision that affects your life, do you go and talk to any authority or do you expect someone else to do it?
10. Why?
11. Have you ever expressed your views about mangrove conservation/management to a local authority?
12. If the answer is yes, what did you say? To whom? Where? What has been the response? Have you seen any changes after you communicated that?

Message expressed	To whom	Where	Response	Changes

13. Have you felt free to express your opinion about mangrove conservation/management?
14. Why?

15. Do you experience any challenges in influencing decisions taken in relation to mangrove resource management and conservation? If so, which challenges?
16. Do you agree with the permanent closure of the bolong?
17. Why?
18. Have you expressed your opinion about the closure of the bolong to local authorities?
19. Have you felt free to do it?
20. Why?
21. Has anyone in your village participated in the creation of Bambang?
22. How has he/she represented your interests?
23. What was the period OCEANIUM said to you (if any) it would close the bolong for?
24. How did you first hear about the permanent closure of the bolong?
25. Have you participated in the mangrove reforestation project led by OCEANIUM (the CDM project I am studying)?
26. Why?
27. Were you involved in the decision-making process of the project? How?
28. (If the respondent was a participant of the CDM project) Did you get paid? What for? How much (per day)?
29. Has anyone informed you about the objectives of the project?
30. If so, who?
31. What did they say the objectives of the project were?
32. Who decided there would be a reforestation campaign in your village?
33. Have you participated in that decision?
34. Are there any other organisations together with OCEANIUM in the mangrove conservation project? Please, list them all.
35. Do you know what carbon credit is? Who gave you the information?
36. Are there any fishermen in your household? How many?
37. Have you or any member of your household stopped fishing since due to the permanent closure of the bolong of Bambang?
38. Describe (if any) the impacts of mangrove conservation on your household livelihoods and income
39. Describe (if any) the impacts of mangrove reforestation projects on your household livelihoods
40. Does any authority support you to carry the costs (if any) of mangrove conservation? If so, how?
41. Who do you think benefits the most from the creation of Bambang?
42. Who do you think is mostly affected?

Annexe B

List of institutional agents interviewed

Name	Institution	Position
Mamadou Bakhoum	Rural Council of Toubacouta	Leader of development project division
Ibrahima Diame	Oceanium	President of management committee of Bamboung
Charlotte Karibouoye	FIBA	Project manager
Abdou Diouf	Rural Council of Toubacouta	Leader of the environmental division
Simon Gomis	French GEF	Project manager
Madeleine Sarr	Ministry of the Environment and Protection of Nature	Manager of the environmental impact assessment division
Anonymous	Oceanium	Project manager
Ebrima Sall	Oceanium	Project manager
Julien Semelin	Fondation Internationale du Banc D'arguin (FIBA):	Project manager
Charlotte Karibuhoye	FIBA	Project manager
Anonymous	National Parks Service	Agent of decentralised bureaucracy
Mr. Somko	National Parks service	Agent of decentralised bureaucracy
Anonymous	UNEP	Cascade Programme Coordinator