“The Rural Environmental Registry (CAR) - an Opportunity for Integrated Environmental Land Management for Traditional Peoples and Communities in Brazil?”

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Abstract

Tropical forests in Brazil are not only important for sequestering carbon, thus reducing net emissions and mitigating global climate change effects, they are also a space for securing livelihoods and preserving the cultural, spiritual and religious practices of traditional peoples and communities. The New Forest Code of 2012 established the obligatory rural environmental registry “CAR – Cadastro Ambiental Rural” for the protection and restoration of forest areas on rural land in Brazil. Traditional peoples and communities require that their cultural and territorial specificities are inclusively considered in the CAR system and in the process of environmental regularization so that their land rights are secured and they can also benefit from public socio-environmental programs. This paper discusses how the CAR can be truly inclusive of diverse traditional communities and how it can best contribute to improving their access to public policies and to promoting Integrated Environmental Land Management.

Key Words: Brazil, Traditional Peoples and Communities, “Quilombolas”, Brazilian Forest Code, rural environmental registry “CAR – Cadastro Ambiental Rural”, Traditional Land Tenure.
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INTRODUCTION

As is widely recognized, tropical forests in Brazil are important for sequestering carbon, reducing net emissions and mitigating global climate change effects. Yet they are also a space for securing livelihoods and preserving the cultural, spiritual and religious practices of traditional peoples and communities.

In recent years, Brazil has made a considerable effort to reduce deforestation. Nonetheless, in 2016, an area of 7,989 km², almost twice the size of Cape Verde, was deforested – which represents an increase of 29% in relation to 2015.

As part of the Brazilian efforts to normalize deforestation and promote environmental restoration, a new Forest Code was instituted in 2012, with Law no. 12,651. One of its main tools is the Rural Environmental Registry – Cadastro Ambiental Rural, CAR. It is an electronic public registry of national scope, mandatory for all rural properties, of which the purpose is the integration of environmental information on rural landholdings.

In this paper, our purpose is to analyze how this environmental mechanism, the CAR, has been thought out and applied for a specific group of rural dwellers: Brazilian traditional peoples and communities (hereafter called PCT after the Brazilian acronym) and what is needed to enhance its positive impact.

The PCT represent a wide variety of traditional livelihoods and identities: at least 286 different “segments” have already been “officially recognized”¹. Indeed, in Brazil and according to the ILO Convention 169, ratified in 2002, the first element for the definition of a traditional group is its auto-declaration as such. Generally, traditional groups follow four types of characterizations: following an ethno-racial criterion (Indigenous Peoples, Quilombola communities², Gypsy People); according to the link with some specific biome or ecosystem (such as Geraizers or Cerrado Peoples); in relation to the predominant labor activity, which stands as an identity mark (Rubber Tappers, Coco Babaçu Breakers, Mangaba Pickers, etc.); or considering the form of occupation and use of the territory, generally conjugated with specific historical circumstances, for example, the Retireiros do Araguaia (cattle ranchers in retreats near the river Araguaia), or the Faxinalenses (small scale farmers in Paraná that grow yerba mate, extract pine nuts and raise pigs on the loose in the forest) (Costa Filho, 2015).

These and other groups are represented in the National Council for Traditional Peoples and Communities (Conselho Nacional dos Povos e Comunidades Tradicionais, CNPCT), created by Decree nº 8750, in May 2016, which substituted the National Commission for the Sustainable Development of Traditional Peoples and Communities, created in 2004. The aim of the CNPCT is to promote the sustainable development of these groups by canalizing the public policy access, both from a social, economic and environmental point of view. By virtue of following traditional livelihoods of low-impact agriculture and customary use of natural resources, Indigenous and Quilombola territories have been officially recognized as Protected Areas since 2006 by the National Strategic Plan for Protected Areas (PNAP, after the Brazilian acronym). Other

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¹ As an example, we can cite: Indigenous peoples, Quilombola communities; Peoples and communities of Terreiro / peoples and communities of African origins, Gypsy People, artisanal Fishermen, extractivists, coastal and marine extractivists; Caçaras; Faxinalenses, Benzedeiros; Raizeiros; Geraizers; Caatingueiro; Vazanteiros; Veredeiros; houseleek catcher; Panceiros; Morroquianos; Pomerano people; Mangaba pickers; Coco Babaçu Breakers; Retireiros do Araguaia; Communities of funds and pasture closures; Ribeirinhos; Cipozeiros; Andirobeiros; Caboclos.

² “Quilombola” is the Brazilian name to refer to former Maroon communities.
groups, even if not officially part of the PNAP, can also be considered important for environmental conservation. Nonetheless, despite the existence of the Council and the inclusion of two traditional groups in the PNAP, there is only one public policy specifically and exclusively dedicated to environmental land management of a particular group, which concerns the Indigenous Peoples.

The CAR and its online databank-system (SICAR) is the latest environmental management instrument for the monitoring and protection of native vegetation and forest areas on private lands and of certain public areas such as Conservation Units and Indigenous Territories. Accompanying the implementation of this new instrument is the opportunity to advance in the discussion and creation of instruments and policies for environmental land management strategies for traditional peoples and communities.

Some progress has already been made. As traditional communities share some specific features that differentiate them from other rural land owners, a specific methodology has been developed for them within the CAR system. A specific IT-module has been created, entitled “CAR-PCT”, to integrate specific needs of traditional peoples and communities, particularly in the registration phase. For example, instead of registering all community members individually, it has been made possible for them to register collectively and submit geo-referenced maps of a communal area. However, despite these efforts, there are still further improvements to be made, taking into account the diverse specificities of this public and not just during the registration phase, but during the whole environmental regularization process.

In order to evaluate the extent to which the CAR registry and the environmental regularization process can succeed in integrating PCT needs, we explore three central questions in the first part of this essay:

1. To what extent does the CAR methodology take into account the auto-definition of PCT, according to collective and individual land use?
2. To what extent are differentiated cultural land tenure systems and land use systems taken into account in environmental regularization in Brazil?
3. How are land tenure conflict situations regarding overlapping registrations in the CAR system handled?

In the second part of this essay, we consider the CAR registry in the broader context of integrated environmental land management and we will address the following questions:

1. Is environmental land management contemplated within an integrated perspective in Brazilian public policies?
2. How can CAR be best adopted as an instrument for environmental land management?

As mentioned above, some efforts have been made to create public policies integrating environmental, social, and cultural planning for Indigenous Peoples. Is it reasonable to desire a policy of this same kind for all traditional peoples in Brazil?

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3 The Indigenous Peoples have a historical trajectory of mobilization and discussion concerning environmental land management of their territories which resulted, in 2012, in the establishment of the National Policy of Environmental Land Management of Indigenous territories-PNGATI. Before and since then, several initiatives have systematically been adopted by the government and others partners in order to support projects to improve the land and environmental management in Indigenous territories.
Thus, can the CAR for traditional peoples and communities be interpreted as an opportunity for the implementation of an integrated environmental land management agenda for traditional peoples? What challenges have to be taken into account?

**PART I: Opportunities and Challenges of CAR for Traditional Peoples and Communities**

I. **A) Understanding How CAR Works**

The environmental registry (Cadastro Ambiental Rural – CAR) is an electronic registry, aimed at mapping land-use information for all rural properties in Brazil. This environmental information is registered in the online system, the SICAR (for Sistema Nacional do Cadastro Ambiental Rural). The objective is to compose a database for controlling, monitoring and combating deforestation as an instrument for environmental management. The Forest Code establishes rules for the declaration of land use and protected areas on rural landholdings, so-called “imóvel rural”\(^4\). All landowners and leaseholders are obliged to register in the CAR and provide information in electronic form on the use of their land. The registry is designed to help the Brazilian authorities enforce compliance with forest protection legislation. In addition, the federal states define their own natural forest restoration programs depending on the specific regional ecosystem.

The registration is obligatory for all rural landowners and leaseholders. Even if very briefly, the Article 3 of the New Forest Code points out that traditional territories also need to comply with the policy:

“For the purposes of this Law, [...] this article is extended to rural properties and possessions with up to four (4) fiscal modules\(^5\) that carry out agro-forestry activities, as well as demarcated indigenous lands and other titled areas of traditional peoples and communities that make collective use of their territory.”

By January 2017, more than 3.95 million rural properties had been registered in the SICAR, an area of 401 million hectares\(^6\) - which is more than eleven times the size of Germany. By January 2017, almost 47,000 CAR registrations had been analyzed. Despite the high entry number of 3.95 million rural properties, there is no exact knowledge of how many of these registrations are from traditional peoples and communities, because some communities are erroneously not registered in the module for traditional peoples and communities, and the number of families or individuals that live in these communities may not be recorded.

At the time of writing, in February 2017, there were 1,746 (collective and individual) CAR registrations in the specific module for traditional peoples and communities. Registries are currently expected to increase

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4\(^{\text{Imóvel Rural}}\), ”Rural Property”, rural property which is intended for extractive agricultural, livestock and agro-industrial activity, either through public recovery plans, or through private initiative.

5\(^{\text{1 Fiscal Module}}\) represents the unit used for rural land taxation according to each municipality. In certain municipalities of rural Amazonia, 1 Fiscal Module can be as big as 100 ha, whereas in rural Cerrado or Mata Atlantica this size can vary between 5 or 50 ha.

in the module for traditional peoples and communities due to recent improvements in the new module for traditional peoples and communities that allow more detailed information to be included for this public.

a) The CAR Step by Step

The CAR is the most important instrument for environmental regularization in Brazil, and only by getting to know its technological scope, can we grasp the extent to which this instrument can be used for the monitoring and the control of deforestation on private and public lands.

After (1) the registration of environmental information in the CAR, follows (2) the analysis of the registered information, (3) the implementation of the environmental regularization programs for recuperation of degraded areas, (4) the monitoring of the individual restoration projects, and if applicable, (5) the establishment of a future compensation market (which still lacks legal regulation).

The Brazilian Forest Service (SFB), inside the Ministry of the Environment, is responsible for the implementation of the environmental registry CAR and establishes the legislative framework conditions for each step of environmental regularization. The local state environmental organizations, Organizações Estaduais de Meio Ambiente – OEMAs, in the 27 Brazilian states, are responsible for the local implementation of environmental regularization. They have to analyze the information in the registry, build technical parameters for the environmental regularization programs and monitor the accomplishment of the restoration projects.

The technical parameters for the environmental regularization programs specify the types of species that should be planted or suggest ways for restoring degraded areas according to the biome specific conditions. Furthermore, each state establishes a regional timeframe for planting and restoration that defines the different steps for restoring degraded and deforested areas in the next twenty years. What is more, the environmental institutions are obliged by law to give the small landowners and small rural producers assistance with registration in the CAR and elaboration of their individual restoration projects. Local NGOs and research institutes as well as rural extension services can be contracted in order to support and assure individual accompaniment and monitoring in this process at the different stages of environmental regularization.

In order to understand the specific module for traditional peoples and communities, the so-called “CAR-PCT”, we will analyze the different tabs inside the online databank SICAR for all rural producers. The registry-module for all owners or tenants of rural properties is composed of different data layers or tabs. The different tabs provide information about (1) the one who registers, (2) the property/landholding information, (3) the personal information of the landowner/landholder and (4) the geographical information. The following tabs give the registrant the opportunity: (5) to upload documentation and (6) to review a final summary of the uploaded information. The technical agent from the OEMA, from a rural

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7 The newly adapted module “CAR-PCT” was presented and made public to the social movements in February 2017.
8 Small landowners and rural producers are producing on areas smaller than 4 Fiscal Modules. 1 Fiscal Module represents the unit used for rural land taxation according to each municipality. In certain municipalities of rural Amazonia, 1 Fiscal Module can be as big as 100 ha, whereas in rural Cerrado or Mata Atlântica this size can vary between 5 or 50 ha.

extension service or whoever wants to support the small landowner in the registration (or even himself, if he desires to) will register as registrant in the first tab. In a second tab, the landowner gives information about the location of his rural landholding (address and access description). In the third tab, the landowner provides his personal information (name, identity number etc.). In the fourth tab, the landowner sees a satellite image of the territory, shot by RapidEye, to indicate the limits of the territory and the localization of the different protection areas, such as native vegetation reserves, the “Reserva Legal”\textsuperscript{9}, permanent protection areas (Área de Proteção Permanente, APP\textsuperscript{10}), and production areas for cattle breeding and agriculture (área consolidada). The fifth tab leaves space for the upload of important documents such as land tenure documentation. In the sixth and last tab the landowner has an overview of all registered information. For instance, an automatic filter will inform the landowner whether the registered area is conflicting with another protection area such as Indigenous Territories or Conservation Units. However, in the registration module there is no possibility to visualize and resolve conflicts regarding geographically overlapping registrations of other landowners in the system.

When the registration process is successfully finalized, the landowner will have a receipt of the registration. Conflicts with other areas will only be resolved through technical analysis of the registries (which will verify the legality of the documents submitted by landowners from the overlapping landholdings). Only after a thorough analysis, can an restoration project be elaborated, complying with the environmental regularization program of each state.

\textbf{b) The Specific Module of CAR-PCT}

\textit{Figure 1: Screenshots of the firsts steps of registration in the CAR-PCT module}

\textsuperscript{9} The Legal Reserve is a fixed percentage that each rural property must maintain or at least compensate for on another property. This percentage varies by region and biome (it varies from 20\% to 80\%). In this area, some controlled and low-impact economic activities are allowed, as long as the forest cover is maintained.

\textsuperscript{10} The APPs are areas on riverbanks, steep slopes, hilltops, mangroves that must have their native vegetation preserved with the environmental function of preserving water resources, soil quality, landscape, geological stability and biodiversity and facilitating the gene flow of fauna and flora.
In addition to the registry-module for all owners or tenants of rural properties, there are two specific modules in the SICAR. There is the module for settlements from the national agrarian reform and the module for traditional peoples and communities. The module for PCT tries to integrate the specific needs of traditional peoples and communities in the registration phase.

The main adaptations of the specific module for PCT include:

- the possibility to register both the representative associations and the individual residents of the territory as owners and beneficiaries of a collective territory;
- the inclusion of a detailed identification field for the different segments (Figure 2);
- inclusion of a field for identifying the link of the registrant with the territory / community;

![Figure 2: Identification of the type of traditional group (segment) in the SICAR](image)

- specific tab for mapping the claimed area and the occupied territory;

![Figure 3: Specific tab for mapping the claimed area and the occupied territory](image)
- the possibility of entering both the area of occupation, called “area of environmental responsibility” and the historically occupied and claimed area, called “area of territory” (Figure 3)

- the possibility to upload documents of self-declaration, in which the community may register, for example, a claimed area that cannot be registered in the CAR because it is in the possession of third parties or in areas of resource use outside of the area effectively occupied by the community, etc.

- The possibility of inserting several documents linked to the different domains declared, which together make up the total area of the perimeter drawn in the tab of geo-referencing.

Improvements of the module of CAR-PCT were included in January 2017 and were presented by the Brazilian Forest Service to the Quilombola representatives and civil society in February 2017 who had clamored for these changes. The most significant improvements include adding a space for detailing the characteristics of the traditional group (identification of the “segment” - Figure 2) and the possibility of registering the territorial area as well as the area of actual use (Figure 3).

c) Benefits and Opportunities of the CAR

The registration in the CAR is of interest for small landowners and producers since it permits access to specific social and agricultural public programs such as:

- access to agriculture credits and insurance;
- access to technical assistance for restoring degraded areas;
- access to the environmental regularization programs that permit better ecological and economic integrated management of the rural land;
- access to new markets: some firms require the registration document of the CAR as a quality voucher for purchasing agricultural products;
- access to future compensation markets: the landowner or producer can sell his native vegetation surplus (*ativo*) as environmental reserve quota to a landowner or producer with native vegetation deficit (*passivo*).

Thus, adherence to the CAR can represent an important opportunity for improving access to important public policy programs for minority groups - traditional peoples and communities and other small landowners and producers, which lack official documentation and are located in distant areas far from government institutions.
d) The Influence of Environmental Regularization on the Visibility of Traditional Peoples

According to some scholars, traditional territory represents up to 25% of Brazilian territory (Almeida, 2010). The absence of data on traditional peoples and, in most cases, the absence of legal instruments to support the land regularization and other rights of traditional peoples and communities aggravate this problem.

Due to the historical invisibility of traditional peoples and communities and the lack of a unique database, it is difficult to accurately estimate all the PCT data (how many they are, where they are, etc.). Furthermore, there are no specific methods for collecting integral data on this public and the little existing data, from health, agriculture or land tenure organizations are not shared or cross-checked with the data in other institutions nor updated. This lack of information leads to a lack of public policies adapted to their needs.

In addition to data scarcity, there are few public bodies that are responsible for and respond to the demands of traditional groups. For the Indigenous Peoples there is a representative body: the FUNAI (the National Foundation for Indigenous Peoples). The Secretariat for the Promotion of Racial Equity (SEPPIR), the Cultural Palmares Foundation (FCP) and the National Institute of Colonization and Agrarian Reform (INCRA) represent the Quilombolas in different stages of their land tenure regularization. Other segments are represented on certain issues by institutions that do not have as their primary function to meet their demands, for example the National Conservation Units organ Chico Mendes Institute (ICMBio), for the agro-extractivists present in Conservation Units for Sustainable Use. Others still do not have any institutions that respond to their demands11. Still, due to the progressive empowerment of social movements and their political pressure to adapt public policies to specific needs regarding their traditional ways of life, some improvements have occurred.

Concerning the Forest Code, improvements include the possibility to register more detailed information in the SICAR, which represents an opportunity for increasing the knowledge on the whereabouts and size of the territories of different peoples and communities. Thus, the CAR could be a chance for traditional communities to become more visible and to gain better access to public policies. The following map shows where traditional peoples currently registered in the SICAR are located in the country.

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11 Despite the absence of governmental institutions that deal directly with this public, it is worth pointing out the existence of several social movement organizations representing different peoples and communities, at national (as the Association for Indigenous Peoples in Brazil, APIB, or the National Coordination for Quilombolas, CONAQ), regional (e.g. Coordination for Indigenous Peoples in the Amazon, COIAB, Interstate Movement for Coco Babaçu Breaker, MIQCB, or National Council for Sustainable Agro-Extractivists, CNS- several of them represented in the National Council for Traditional Peoples and Communities) or at local level (more information can be found on "Portal Ypadê": http://portalypade.mma.gov.br).
Nonetheless, the CAR system still needs to address:

(1) the auto-definition of the different segments of PCT according to collective and individual use of land;

(2) differentiated cultural land tenure systems and land use systems in environmental regularization in Brazil;

(3) land tenure conflicts regarding overlapping registrations in the CAR.

We will address each question individually in the following sections.
I.  B. Challenges of CAR


To reflect on how CAR contemplates the individual or collective auto-definition of different traditional groups, we will use an example from the northeastern region of the country, in the states of Pernambuco and Alagoas.

In 2015, the National Forestry Development Fund (FNDF) of the Ministry of the Environment (managed by the Brazilian Forest Service - SFB) selected two non-profit organizations for registering non-titled *Quilombola* communities of the Northeastern states of Alagoas and Pernambuco in the online databank SICAR. The two organizations registered 15,539 *Quilombola* families either individually or collectively. The Northeastern semi-arid region is a region with low CAR registration numbers in general, due to lack of access to information, resources and complex infrastructure.

As CAR is self-declaratory, the owner / landholder is responsible for the information inserted in the SICAR. As formerly mentioned, traditional peoples and communities have different forms of land occupation and use of natural resources, but still need to register in the CAR as well. To help in this task, the Ministry of Environment adopted a specific methodology for the registration of *Quilombola* communities in the Northeast.

This methodology determined that, in the SICAR, in the tab where geographical information is required, traditional peoples and communities were asked to declare the area they occupy, and not register the land they claim. This was determined as such because the improvements of the specific module had not yet been developed - where communities can differentiate between the area of environmental responsibility and the area of territory. Indeed, the claimed area is usually bigger than the area of actual use and is often disputed by other landowners. Inside the SICAR, the *Quilombola* community had the possibility to upload a “Term of Self-declaration” to register the claimed area, but this document does not have legal or administrative implications in the process of land regularization.

In Pernambuco, the communities supported by the Forest Fund chose to carry out the registration of their communal area collectively and the process of registration was highly appreciated by the beneficiary communities. In addition, the rural extension service in charge of the project carried out a simplified diagnosis of the communities - their main problems and the environmental potential of each territory. The project included workshops on diagnoses, training on socio-environmental issues and regional exchange meetings, which generated results beyond those initially expected. The capacity development of the community members and the exchange between the communities during the project presented opportunities for learning and political articulation, creating expectations and interest regarding the steps following the registration in the SICAR (e.g. the adherence to the programs for environmental regularization, the elaboration of an individual project for restoration etc.). The registration in the CAR was perceived as

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something positive, beyond a legal obligation, becoming a possible instrument of visibility for these communities, as well as creating a space for discussion on issues related to the following environmental regularization steps, such as territoriality and political conjuncture.

In Alagoas, the Quilombola families supported by the Fund chose to carry out the registrations in the CAR on an individual basis: instead of registering the entire community area, the families opted for registering their individual family territory. The project had the support of the regional Quilombola movement and the demand for carrying out the individual registration in the specific module for traditional peoples and communities was a direct request by the Quilombola families concerned.

Some families do self-identify as members of a collective territory and are recognized as members of a traditional group or community, but still prefer to register individually in the CAR. Based on the right of self-identification, there is no legal impediment to the individual registration of Quilombola families, nor is there any practical infeasibility in registering Quilombola families individually in the module of traditional peoples and communities (CAR-PCT).

The opposite strategy chosen by representatives of Quilombola communities in two different states of Brazil – one defending collective registrations and the other one opting for an individual registry – shows that, even though the communities share the same cultural and historical background, they have different demands regarding the rights, occupation and use of their territories. Differences in the option for the individual or collective registry may be related to different forms of territorial appropriation and management and/or the socio-political context of these territories.

The examples in Alagoas and Pernambuco showed a certain limitation in the integration of these communities by the environmental registry. In general, there are still several improvements to be made concerning both technical tools and legal instruments of the CAR for traditional peoples and communities. For example, the Forest Code and the legal instruments for environmental regularization do not have sufficient clear guidelines on how to deal with individual registrations of traditional peoples and communities.

The social movement representing the Quilombola communities in Brazil at federal level, the National Coordination of Quilombola Rural Communities - CONAQ, criticizes the methodology applied in the CAR registration of the two Quilombola areas mentioned above. Indeed, during the registration of these areas in 2016, the improvements of the IT-module had not yet been integrated and the claimed area was only inserted in the environmental register as a written declaration, the so-called “Self-Declaration”. However, according to the CONAQ, the CAR still needs to better express the claims to land of the Quilombola people. They also argue that CAR highlights and thus encourages conflicts through the overlaps in claims to land that become more visible and public as they are inserted into the system. Finally, they argue that individual registration socially and politically weakens Quilombola communities and should not be an option.

However, the current position of the Ministry of the Environment is that the objective of CAR is not land tenure regularization, traditional communities should not take responsibility for environmental infractions located in areas that they claim are theirs but that they are not currently using and that the CAR registration should not aggravate conflict situations between traditional communities and other tenants and landholders. Alencar et al. (2016) discuss the implications of environmental regularization for Quilombola communities,
concluding that the CAR is an important instrument for defining the land tenure demands of these communities, but cannot be considered official land tenure documentation.

b) Taking into Account Differentiated Cultural Land Tenure and Land Use Systems in Environmental Regularization in Brazil.

The Forest Code establishes strict rules regarding environmental regularization, establishing biome specific percentages of areas with vegetation cover, called legal reserves (Reserva Legal), that must be protected, through conservation or restoration. In addition, certain risk areas, such as areas on steep slopes and areas surrounding rivers and watercourses, among others, have to be mapped in order to be permanently protected, the Areas of Permanent Protection - APP. In both Reserva Legal and APP no agriculture or animal pasture is permitted.

A complete and strict isolation of these areas represents a major challenge for some traditional peoples and communities, such as the Faxinalenses who use the forest of their Faxinal land collectively for low impact extractivism and for cattle breeding of small and large animals. The Faxinalenses live in central and Southern Paraná, in the tropical biome “Mata Atlântica”. In this biome, the Reserva Legal only has to exist on 20% of the rural property. At the same time, the Faxinalenses dispose in their territory of a forest area that is much bigger than the agricultural area – contrary to most small and large-scale farmers (Hauer and Gubert Filho, 2010).

If the Faxinalenses whose animals graze in the Reserva Legal were to follow the rules of the Forest Code strictly, they would have to break with their main traditional activity of cattle breeding inside the forest areas (Marés and Rossito, 2016). In order to respect and permit sustainable traditional livelihoods, the Forest Code must take into account traditional forms of land use of traditional peoples such as the Faxinalenses.

In a similar way, people that do not have precise territory frontiers are badly integrated in the CAR instrument, such as the Coco Babaçu Breakers, women, whose sustainable livelihood depends on the natural resources of the Babaçu palm trees, which are frequently situated on third-party territories. The Coco Babaçu Breakers also have multiple identities, sometimes they identify themselves as Quilombolas and live in Quilombola territories, or they may live on agrarian reform settlements or they may be small farmers living on landholdings or properties where the palm trees can be found. Only in those cases do the territories of Coco Babaçu Breakers ‘fit’ in the CAR registration.

In other cases, where the Coco Babaçu Breakers have to access the palm trees on territories of other farmers or even on Conservation Units, the CAR registration is more complicated. The Coco Babaçu Breakers are frequently forbidden to access the Babaçu palm trees and there are still several conflicts with landowners that refuse to grant access to the palm trees. There are even cases of neighboring landowners destroying the

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13 Extractivism is an exploitation system based on the sustainable collection and extraction of natural resources.
palm trees in order to prevent the women from accessing them. It may be necessary to review the rules for including the needs of the Coco Babaçu Breakers in the environmental regularization process.

Those two examples, as well as the Quilombola case, give us a small idea of the challenges concerning the CAR registration and the complexity of adapting it to the different land management forms and land use systems of traditional peoples and communities.

c) Conflict of Land Tenure Regarding Overlapping Registrations in the CAR.

As the CAR is not supposed to have land tenure implications, the Forest Code specifically states that the registered information is only of use for environmental regularization.

The areas registered in the CAR should thus inform only about the environmental responsibility of a producer and his responsibility to protect and to restore vegetation areas on his land. However, a single area may be registered several times in the registry, meaning that more than one entity claims environmental responsibility for that area (farmers, Conservation Units, Indigenous Territories, land reform projects for small scale farmers). Among the 3.95 million CAR registrations realized until February 2017, there are cases where there are up to four different registrations for the same area.

In order to decide who is responsible for the environmental protection of that area, the notary land documentation is analyzed. This analysis will sooner or later fall back on land tenure information of that area: the one who has certified notary documentation on his land or leasehold probably has the best chance of his CAR registration being “validated”.

That is the reason why some notaries in hinterland regions even “sell” the CAR registration (which should be of no charge for smallholders) as a first step for land tenure regularization. Traditional peoples and communities rarely dispose of official documentation on their ancestral land. For example, from the current 5,000 existing Quilombola communities (claimed by the representative movement CONAQ), 2,849 are legally recognized as Quilombola communities in Brazil by the Palmares Cultural Foundation (FCP). The INCRA, which is responsible for the Quilombola land regularization process, states that 1,536 communities are currently waiting for their land regularization process to begin. According to current information, only 153 territories, with a total of 241 communities (there can be several communities on a single territory), actually dispose of a land title. Therefore, they are at higher risk of losing a case regarding CAR registration conflict and of consequently losing their territory. There have also been cases of CAR registration being impossible, due to lack of basic identification documentation of the territory representatives. This demonstrates an urgent need for coordination with the bodies responsible for issuing this documentation, for example, how these services can reach inhabitants of remote locations, who do not hold birth certificates, etc. - and/or make this differentiation within the CAR-PCT module.

Traditional peoples frequently express that they feel forgotten by public authorities and feel excluded from public policies. They frequently suffer economic pressures and discrimination in land tenure and other political issues. This is why, for traditional peoples and communities, environmental regularization is a process that goes beyond the environmental scope, bringing hope for opportunities to enhance their
visibility and access to political and social rights, if the government recognition and support that they require can be provided and the registration integrated with other social and environmental policies.

**PART II: The CAR from an Environmental Land Management Perspective**

To adequately deal with the challenges of adapting the CAR for PCT, greater discussion on the environmental land management of the territories of these groups is required.

First we need to define environmental land management (GAT) and how it is understood in the realm of public policy and, above all, how this concept needs to be considered to make sense from a PCT perspective. Therefore, we will focus on the following questions:

1. Is environmental land management contemplated within an integrated perspective in Brazilian public policies?
2. How can CAR be best adopted as an instrument for environmental land management?

**II. A) Understanding the Concepts of Environmental Land Management**

**a) Defining Land Management**

Traditionally, the term land management refers to the exercise of sovereignty of the nation-state in its territory. That is, the set of public actions carried out to order and develop the land resources. In this sense, land management is idealized on a nation-wide scale, according to a centralized political framework, in which the Federal Government exclusively assumes the role of the organizer and executer of development in its relation to society (Duncan, n.d.).

However, since the 1990s, the Brazilian government has been making gradual changes in the paradigms that guide its land management strategies, incorporating social participation into the processes of elaboration and implementation of public policies and evolving towards the adoption of the concept of "land governance" which refers to a territorially organized society managing issues of public interest, based on the joint and cooperative involvement of social, economic and institutional actors (Dallabrida, 2007: 5).

This also refers to a development approach whereby the government seeks to operate its programs from territories that may differ from the usual political-administrative division of the country. By recognizing that civil society is a legitimate actor in the management of a given territory and recognizing the local identity and political organizations of the territory, governmental authorities can promote a process of identification of territories based on alternative mechanisms and assume the possibility of decentralizing its actions.

This orientation contributes to the expansion of the concept of land management in Brazilian public policy, opening up to an approach known in the literature as "social land management", where social participation is seen as an essential condition for the establishment of successful sustainable rural development. Thus,
the social management perspective highlights the importance of social organizations assuming a greater share of responsibility in the decision processes (Duncan, n.d.).

Land management is often defined based on the definition of the "vocation" of the territory, prioritizing the development of the functions of the territory in question. For example, Conservation Units require specific instruments to aid the protection of natural resources; territories undergoing economic conversion would benefit from appropriate fiscal measures; and in the same way, ethnic territories need their own mechanisms for promoting development, consistent with their cultural patterns and the ways in which natural resources are used.

Thus, land management necessarily involves: public management from governmental authorities, social participation in land management, mechanisms for the recognition of territories, and the definition of vocations in the territories in question.

b) Defining Environmental Management

Environmental management is a much more technical concept than land management, normally based on environmental licensing and environmental quality standards. The Brazilian environmental strategy basically refers to "command and control" instruments for proposing the most rational use of natural resources (Padula and Silva, 2005).

The Brazilian Constitution from 1988 had an important role in the diffusion of new paradigms linked to the environment, and specifically to the dissemination of a systemic interpretation of environmental, social and cultural rights, promoting "social-environmental" and transversal public policies (Santilli, 2005). The National System of Conservation Units (SNUC, 2000) is an example of how the role of traditional populations in promoting environmental conservation has gained ground in Brazilian environmental policy.

Yet, despite advances, the term "environmental land management", in its broadest sense, still appears very timidly in public policies. Land management and environmental management for PCTs, are still dealt with separately when actually we need to consider a management model that integrates the two perspectives. As we will describe later, initial efforts under the impetus of the Indigenous social movement, have succeeded in establishing a pioneering legal framework, with the National Policy for the Environmental Land Management of Indigenous Lands (PNGATI). This policy, which will ideally be replicated for other traditional segments, shows how necessary it is to differentiate these groups from other sectors of society when it comes to dealing with territory.

c) Environmental Land Management for Traditional Peoples and Communities

To adequately address the demands of environmental land management for PCT, three additional elements must be taken into account: collective resource management (common use systems), the management scale
(community based management), and the integrated management of natural resources (integrated management).

**Common Use Systems (common-pool resources)**

Common use systems, also known as common-pool resources - refer to a specific form of resource management, in which it is the group that holds exclusive rights over the territory and the resources within - not just a single individual (Ostrom, 1990; Poteete, 2010; McKean, 2000). This specific form of natural resource management is already legally recognized in Brazil for some traditional groups. For example, decree 4887 from 2003, regulated for the first time the collective titling pro indivisa and ad perpetuam of Quilombola territories, considered an important step in Brazilian legislation for the affirmation of land rights for minority ethnic groups (Rocha, 2005). Common Use Systems were also recognized when creating a specific CAR-PCT-module, as previously mentioned.

**Scale of management (community-based management)**

The management scale for PCT should be community-based management, where management is "by, for, and with the local community" (Western and Wright, 1994) with community management autonomy within the territorial limits of the group. The ILO Convention 169, enacted by Brazil in 2004, recognizes, “the right of tribal peoples to define their own priorities in the development process (...) as well as their necessary participation in the formulation, implementation and evaluation of plans and national and regional development programs that may affect them directly” (article 7).

Community-based management coincides with the concept of community-based conservation; a concept that emerged from studies in the global South in the 1970s, concluding that conservation policies that exclude local populations usually fail (Berkes, 2004; Barretto Filho, 2006; Berkes 2007). Furthermore, evidence from the literature demonstrates that the success of environmental management is associated with local groups being able to manage their own common resources, notably from the elaboration of an ad hoc set of rules. Inhabitants are more likely to be involved in environmental protection when they have rights over the territory and have the possibility to define the rules of use of space and resources (Leach, Mearnas and Scoones, 1999; McKean, 2000).

**Integrated management**

The central idea of community-based conservation lies in "the coexistence of people and nature, as distinct from protectionism and the segregation of people and nature" (Western and Wright, 1994, apud Berkes, 2007) and thus coincides with the concept of "integrated" management, according to which natural systems are intrinsically linked to social systems. This is based on one of the fundamental principles of ecology and environmental science: the interdependence of living, including human, and non-living components in the ecosphere. In fact, since all ecological systems are composed of biotic, abiotic and anthropic elements, a dynamic interdependence always occurs between ecological and social systems (Vieira, Berkes and Seixas, 2005). Thus, environmental land management must be understood from an "integrated" perspective,
seeking to reconcile the conservation of natural resources with the fulfillment of human needs. This understanding is particularly important for PCT, who still maintain a way of life that is strongly associated with the environment.

The elaboration of a public policy for environmental land management, that guarantees the rights of traditional communities and assures the conditions for traditional forms of use and occupation of the territory, which in turn, can contribute to environmental conservation, is a complex task. It is necessary to consider the intrinsic scope and interface with other public policies, the diversity of realities, visions and challenges existing in their territories, the historical processes they have had to deal with and why and the conditions in which they live today. In addition, it is necessary that the various actors involved in the agenda (communities, federal, state, and municipal public bodies from diverse realms - environment, land policy, social, etc.) work in partnership, with a common conceptual basis, for the construction of legal policy instruments. Only by finding common concepts and agreements, will the public policy developed be legitimized, respected and applied by all involved.

II. B) CAR and Environmental Land Management

a) Integrated Environmental Land Management in Brazilian public policies

The next step is to see if there are any integrated environmental land management initiatives in Brazilian public policies that do: (i) consider the multiplicity of actors and interests involved and (ii) value the concepts of common pool resources, community-based management and the interdependence between ecological and social systems. This is for assessing whether and how the CAR can be an instrument in sync with other actions and perspectives for environmental land management of PCT.

In fact, some traditional communities, for example, Indigenous groups, already have more systematized and public discussions on the topic as well as legal instruments (such as the PNGATI) to support and foment integrated environmental land management initiatives to better protect their territories and communities.

A dialogue was also initiated between the Federal Government and the Quilombola communities in 2013 in the context of an Inter-Ministerial Working Group that also dealt with the CAR for Quilombola communities. These discussions made it possible to carry out a process involving consultation and work with more than 200 representatives of Quilombola communities in a series of local and national workshops. This process resulted in the elaboration of guidelines on the subject and the creation of a new working group (with participation from members of the communities and civil society at large) to institute a legal instrument to support integrated environmental land management actions in these territories.

However, the discussion on how to integrate CAR and environmental land management for other traditional community groups has barely been translated into governmental action. This is mostly due to the historical invisibility of these communities and the precarious regulations regarding their rights. The fact that they do not have institutions that clearly respond to their demands, or even that hold basic information about them, makes it difficult to assure basic rights and policies for these groups (for example, the right to territory, education, health, etc.). Environmental land management policies should be integrated with these other
policies. Unfortunately, the integration of environmental land management with other public policies valuing common use systems and community-based management and recognizing the interdependence of ecological and social systems, is still at a very early stage for the majority of traditional groups.

b) The CAR as Instrument for Environmental Land Management

The CAR can be understood as a public instrument contributing to planning and development action, focused on environmental preservation and recovery. So, in what aspects can the implementation of CAR be understood as a step towards an environmental land management policy dedicated to PCT? Is it possible to interpret the CAR as an instrument of environmental land management, in the same way as other existing tools and that have been consolidated in support of PCT, such as participatory mapping and Local Plans for Environmental Land Management (the principal instrument in dealing with Indigenous Lands)?

So, although the CAR is officially regarded as an environmental instrument, is it also possible to regard it as an instrument for creating an integrated vision of environmental land management?

To date, there is no official concept defining the term “Environmental Land Management” and transposes it to all PCT groups. However, considering the existing legal instruments and discussions held, it is possible to highlight some fundamental aspects that will need to be considered: (i) the self-identification of communities, empowerment and autonomy for the management of their territory, (ii) recognition and appreciation of traditional ways of using and occupying the territory; (iii) guarantee of respect for land rights; (iv) conservation and sustainable use of natural resources combined with local development of communities, among others.

Thus, to assess the extent to which the CAR represents an opportunity for environmental land management for PCT, we will highlight its potential contribution to those aspects.

(i) Self-identification of Communities, Empowerment and Autonomy for the Management of their Territories

In the PCT module, the traditional group must correctly identify as belonging to a specific segment. The data of the person or entity that is providing the information and thus responsible for the registration, (which is normally the community association) is also demanded. When it comes to collective territories (which implies a common responsibility for the management of the community), it is assumed that the registration in the CAR encourages a collective discussion so that everyone will appropriate and agree to their commitments in terms of environmental regularization. In that sense, registering in CAR may encourage collective discussion that can be an opportunity to strengthen community cohesion, empower communities and contribute to the idealization of a common future vision of the territory and its use by all inhabitants.
(ii) The recognition and appreciation of traditional forms of using and occupying the territory

The CAR and the subsequent steps of the environmental regularization process can give greater visibility to these historically marginalized communities. The battle to legally endorse the necessary adjustments both in the CAR and in the process of environmental regularization so that the specificities of the various traditional groups are considered should stimulate dialogue on this previously ‘invisible’ matter. From this, regulatory frameworks that recognize and guarantee the continuity of traditional forms of land use and occupation that have historically contributed to environmental conservation should also be endorsed. Furthermore, efforts need to be made for raising the awareness of technicians from the state environmental institutions to respect the rights and specificities of the traditional groups, with training on how to best do this when working with this public and using the CAR-PCT module accordingly.

(iii) Respect for Land Rights

The availability of information on the area that the communities attribute to being theirs, due to use and ancestral occupation, can facilitate the land regularization process. The availability of this information on the SICAR system, apart from offering official visibility, supplies geo-referenced registration of the declared territories, for most of the traditional groups for the first time. During the process of analysis of the registrations, the State environmental organizations will verify the overlapping areas and demand land tenure documentation to verify legitimacy. During this process (and particularly in the Amazon region) care needs to be taken to identify irregular occupations in territories claimed by traditional communities. This information in the CAR system could also benefit these communities when destining public lands in national land regularization programs such as Terra Legal, for example.

(iv) The Conservation and Sustainable Use of Natural Resources Coupled with the Local Development of Communities

Recovery plans for degraded areas in order to comply with the environmental regularization process can contribute to this aspect because it may encourage the collective discussion of land management planning, stimulating a broader discussion on the territory, its natural resources, and the rights and obligations of community members for the sustainable management of the territory. Some communities may go even further, during the process of registering in the CAR and elaborate participatory community mappings, identifying the potential, scarcity and challenges for resources management that may contribute to productive inclusion and local development. This kind of diagnosis may be used to adopt local environmental land management plans (PGTA), defining better strategies to achieve sustainable development for these territories. Deeper discussions on the management of the territory, its resources and possibilities of developing socio-biodiversity value chains, can also facilitate policies for strengthening sustainable extractive activities and improve the life conditions of the communities.

Finally, it is important to consider that both the environmental liability recovery plans and the existent PGTA of the territory of the traditional community should be considered from a more comprehensive perspective. Environmentally speaking, it is necessary to access the local land management instruments (such as the environmental recovery plans for neighboring properties and the management plans for
Conservation Units) as well as larger scale management instruments (such as the State Ecological Economic Zoning) in order to be more convergent and also to favor for example, the creation and maintenance of ecological corridors, making the environmental conservation strategies of the region more effective.

CONCLUSION

The lack of flexibility of the CAR in considering different forms of land use, reflects difficulty in taking into account the specificities of land use, based on the livelihoods and cultural activities of different traditional groups. It seems impossible to apply the CAR instrument’s mainstream rules to traditional groups that, for example, use to let their livestock sustainably graze in the Reserva Legal, such as the Faxinalense, or that rely on natural resources and fruit located on third party territories, such as the Coco Babaçu breakers. Moreover, overlapping individual (mainstream) and CAR-PCT registries can impel land conflicts - which concludes that the CAR does indeed have territorial implications.

As we have seen above, the CAR can be an opportunity for: better access to social and agricultural public policy programs for PCT; stronger internal cohesion and empowerment of the traditional groups; collective discussions and agreements concerning the adoption of environmental land management strategies – also to deal with internal and external territorial threats\(^{14}\); and it can potentially give visibility to these populations in the socio-environmental policy debate. In order to assure that these benefits for PCT are met, environmental regularization must be embedded in a broader perspective of integrated environmental land management that complies with certain criteria, as we have shown in the second part of this paper.

Finally, there are two remaining considerations for designing an integrated environmental land management policy for PCT:

- Is there political will to include the specificities of PCT in environmental regularization?
- Is it possible to think of PCT as a homogeneous group from the perspective of environmental land management? Is there any real commonality among the PCT, which suggests that a single system can take into account all the particularities of the different traditional groups? In fact, even if the groups are cohesive within a legal concept, and even if it is possible to identify several principal commonalities, the different traditional groups do have different forms of land and resource use.

Based on our analysis and field experience, we conclude that the most important factor for successfully integrated environmental land management instruments is the full consideration and integration of the different cultural specificities of each people or community. As we see throughout the article, the CAR could be an important instrument for offering greater visibility to traditional peoples and communities, contributing to the fulfillment of their rights and the recognition and respect for their social and cultural specificities and forms of land use and occupation, having these recognized, incorporated and valued in policies of environmental land management dedicated to them.

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\(^{14}\)For instance at the internal scale: concerning the population growth, changes of habits, concentration around schools or medical centers leading to shortage of natural resources etc. - at the external level: pressure of agribusiness, contamination by pesticides, impacts of mining or hydropower activities, etc.
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List of Abbreviations

APP  Área de Preservação Permanente
      Permanent Preservation Areas
CAR  Cadastro Ambiental Rural
     Rural Environmental Registry
CAR-PCT  Cadastro Ambiental Rural para povos e comunidades tradicionais
         Rural Environmental Registry for traditional peoples and communities
CNPCT  Comissão Nacional de Desenvolvimento Sustentável dos Povos e
       Comunidades Tradicionais
      National Comission for Sustainable Development of Traditional Peoples
      and Communities
CONAQ  Coordenação Nacional das Comunidades Negras Rurais Quilombola
       National Coordination of Quilombola Rural Black Communities
FCP  Fundação Cultural Palmares
     Palmares Cultural Foundation
FNDF  Fundo Nacional de Desenvolvimento Florestal
      National Fund for Forest Development
FUNAI  Fundação Nacional do Indio
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<tr>
<th>Abbreviation</th>
<th>Full Name</th>
<th>Description</th>
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<tr>
<td>GAT</td>
<td>Gestão Ambiental e Territorial</td>
<td>Environmental Land Management</td>
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<td>ICMBio</td>
<td>Instituto Chico Mendes de Conservação da Biodiversidade</td>
<td>Chico Mendes Institute for Conservation and Biodiversity</td>
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<td>ILO</td>
<td>International Labor Organization</td>
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<td>INCRA</td>
<td>Instituto Nacional de Colonização e Reforma Agrária</td>
<td>National Institute for Colonization and Land Reform</td>
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<td>MMA</td>
<td>Ministério do Meio Ambiente</td>
<td>Federal Ministry of Environment</td>
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<tr>
<td>OEMA</td>
<td>Organização Estadual de Meio Ambiente</td>
<td>State Environmental Organization</td>
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<td>PGTA</td>
<td>Plano de Gestão Territorial e Ambiental</td>
<td>Environmental Land Management Plans</td>
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<td>PNGATI</td>
<td>Política Nacional de Gestão Territorial e Ambiental de Terras Indígenas</td>
<td>National Policy of Environmental Land Management of Indigenous Lands</td>
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<td>PCT</td>
<td>Povos e Comunidades Tradicionais</td>
<td>Traditional Peoples and Communities</td>
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<td>PRA</td>
<td>Programas de Recuperação Ambiental</td>
<td>Environmental Regularization Programs</td>
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<td>SEDR</td>
<td>Secretaria de Extrativismo e Desenvolvimento Rural</td>
<td>Secretariat for Extractivism and Rural Development (MMA)</td>
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<td>SEPPRIR</td>
<td>Secretaria de Políticas de Promoção da Igualdade Racial</td>
<td>Secretariat for the Promotion of Racial Equality Policies (Presidency of the Republic)</td>
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<td>SFB</td>
<td>Serviço Florestal Brasileiro</td>
<td>Brazilian Forest Service (MMA)</td>
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<td>SICAR</td>
<td>Sistema de Cadastro Ambiental Rural</td>
<td>National Online-System of CAR</td>
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<tr>
<td>Terra Legal</td>
<td>Programa de Regularização Fundiária na Amazônia Legal</td>
<td>Land regularization Program in the Legal Amazon</td>
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