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Local politics of floodplain tenure in the Amazon

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Abstract: Research on community-based management system has been often grounded on monolithic institutional, social and ecological perspective with focus on the commoners as the only local actor, collective territorial rights as the only local tenure system, and the managed resource unit or ecosystem as the only contested resource driving collective action. However, CBMSs are embedded in local social-ecological systems usually characterized by multiple ruling systems, different local groups, and heterogeneous ecological systems. In this paper I discuss how the floodplain tenure system is negotiated and rearranged between two local groups – community residents and large landholders. This complex and dynamic arrangement comprises three layers of property rights which are combined according to changing ecological and social context. Based on longitudinal empirical data spanning 20 years of research, I describe the history of contemporary human occupation, and the most recent socioeconomic and institutional changes in the region in order to unpack the dynamics of the floodplain tenure in the region. I conclude that assumptions that integration of local management system into a formal legal framework suffices to achieve an efficient co-management system is rather simplistic. Despite major structural changes in the formal tenure framework, power relations between different local users may remain unchanged unless local perceptions and everyday life practices of power relations are changed. Unpacking the multiple ruling systems and everyday life practices that mediate interactions between different local actors is fundamental to understanding how the commons are appropriated at the local level. Therefore, a local contextualization of the social and ecological structure is crucial to reveal potential barriers to the development of an inclusive and sustainable production system.

Keywords: Amazon, floodplain, local management systems, territorial governance

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1. Introduction

The local governance of natural resources has undergone major social transformations over the last few decades. From virtually invisible institutions in conservation research and practice, community-based management systems (CBMS) have become a key policy strategy to prevent the *tragedy of the commons* (McCay and Acheson 1987; Ostrom 1990). Grounded in models of collective action and sustainable production, numerous CBMS case studies worldwide have provided solid empirical evidence upon which the *theory of the commons* has been elaborated (Ostrom et al. 2002). The *commons* narrative resonated with advocacy and policy circles in the North and in emerging democracies in the South (Pinkerton 1989; Wilson et al. 2003; Armitage et al. 2007). CBMSs have gradually been integrated into co-management systems in order to address power asymmetries between commoners and other stakeholders, such as private and state actors (Berkes and Pomeroy 1997; Adger et al. 2005).

Despite major advances towards the recognition of local management systems in territorial and environmental governance, co-management systems have often yielded disappointing results. I argue that persistent inequalities and conflicting interests among local users are some of the issues that inhibit the expected devolution of power to local communities. Researchers and practitioners have attempted to make CBMS more visible and to propose it as a suitable means of achieving justice and sustainability goals. However, in doing so they have – often unintentionally – presented such customary institutions as the only local tenure system in place and as one that is characterized by symmetric relations. As a result, CBMS research and practice have been consolidated through an incomplete institutional, socioecological analysis. It is focused on commoners as the only local actor, common property as the only local tenure system, and the managed *commons* as the only contested matter driving collective action (e.g. Ostrom 1990; Berkes and Folke 2000).

CBMSs are embedded in social-ecological systems in which multiple interactions, ecosystems and tenure systems are shaped and reordered over time and space according to local contexts (Adger et al. 2005). Local tenure, for instance, may encompass multiple institutional arrangements that are formed through contestation and negotiation over resource access and use among different local users (Peters 1994). In this dynamic process, different local users exercise

their agency by combining distinct norms, practices and relationships according to their perceptions, social positions and assets (Cleaver 2002). Multiple-use common-pool resources (see Steins and Edwards 1999) and co-management (see Jentoft 2005; Armitage et al. 2007) perspectives are theoretical efforts to capture the multifaceted context in which CBMSs exist. However, while these perspectives often emphasize social relations (Berkes and Pomeroy 1997) and asymmetries (Cash et al. 2006) between commoners and non-local actors (e.g. state and corporations), the everyday politics among different local users remains understudied.

In addition to the social embeddedness of CBMS, the ecological context plays major role in the design and implementation of local rules regulating resource use and monitoring (Bromquist et al. 1994). Although the *commons* are often classified according to a particular ecosystem/resource units (e.g. forest, fishing, grasslands, water, game), in more heterogeneous and changing ecosystems the dynamics of landscape reconfiguration is particularly relevant to understand how CBMSs emerge and change. Wetlands are a case in point where annual river fluctuation creates permeable boundaries between water- and land-based resources (Junk 1997). These dynamic ecosystems, characterized by multiple and changing landscape units, host a range of human activities throughout the year. The continuous environmental change set the stage for contestations of access to and control over multiple-use common pool resources among different local users.

In the Lower Amazon floodplain, two main local users – riparian residents and landholders – appropriate local resources. The riparian residents are ethnically mixed peasants (*caboclos*) characterized by a combination of Indigenous, European and African sociocultural traits.[1] Their social position, distinct from the 'authentic' Indigenous Amazonian population and marginalized migrant settlers, has – until recently – made the *caboclos* an invisible population among researchers and policy-makers (Nuggent 1993). Their livelihood has been shaped by broader economic and political processes (e.g. economic cycles, political uprising and governmental development projects) as well as local social and ecological processes (e.g. environmental patterns and social interactions) (Adams et al. 2009). Residents' social life is particularly rooted in the mosaic and changing nature of the floodplains. The risky nature of the ecosystem creates some constraints but also fosters opportunities to build resiliency through diversity of production systems, institutions and social relations (Harris 2005, Castro 2009; Lima 2009). However, while much emphasis has been placed on social relations among riparian residents, little has been described about their social relations with the landholders with whom they have shared the floodplain for the last two centuries.

Landholders constitute a rural elite that, since the 18th century, has appropriated a large share of the floodplains to establish extensive production systems like

[1] The term *caboclo* has been contested by some scholars as it often implies derogatory meanings of laziness, ignorance and underdevelopment. In this article I do not engage in this debate and use *caboclo* as a social category with particular sociopolitical and historical features (Adams et al. 2009).

cocoa and cattle ranching (Merry et al. 2004). Despite the asymmetric relations, both local users have kept their access to and use of the floodplain resources. This dual access is based on two layers of local property rights: the CBMS, emerged more recently, is controlled by the riparian residents while long-lasting local social norms that are controlled by the landholders. In order to make the CBMS visible in the region, researchers and practitioners have overlooked the subtle social norms rooted in local asymmetric relationships. I contend that temporal, spatial and social diversity has played a key role in the way this dual floodplain tenure arrangement has been crafted, exercised and negotiated between the two parties. The assumption of CBMS as the single local tenure system has not only provided an incomplete picture of how access and control over local natural resources are negotiated among users, but it has also reinforced (invisible) power asymmetries between the two local actors.

In the following sections, I discuss how seasonality, human occupation history and economic alternatives have shaped social relations between the two local actors and with the local tenure system. The analysis is based on a longitudinal research of over two decades, undertaken in three phases. Between 1990 and 1994, an ethnographic study was carried out in three communities with different levels of performance in their CBMS. Data sources included in-depth interviews with community residents, structured questionnaires to measure the production system in 30 randomly selected families, and participant observation. Between 1995 and 2003, irregular follow-up visits included interviews with NGO members, state agents, local leaders, and riparian residents engaged in discussions over a new territorial model for the floodplain. During 2008 and 2013, annual visits were carried out to assess the implementation of the new territorial model based on co-management principles. Data sources included interviews with key stakeholders, observations and reports prepared by a local NGO that was directly involved in the implementation of the co-management system.

2. Environmental, social and historical context

The Lower Amazonian floodplain is a patchy and constantly changing landscape. The annual river level oscillation – with approximately five meters' difference between the high and low water seasons – creates a rhythmic *pulsing system* that allows for the reloading of water nutrients and fertile soil sediments (Junk 1997). During the peak of the high water season in May, the whole landscape is considerably flooded. In the low water season, a mosaic of four main sub-systems emerges (Figure 1). *River streams* are channels that contour the floodplain islands. They are connected to *lake systems*, clusters of semi-open, interlinked water bodies located within the floodplain islands. *Lowlands* are areas of fertile bare soil formed by gradual sedimentation process, where grass grows naturally every year. They may expand over time, giving rise to unclaimed land (known locally as *grown land*). *Natural levees* are higher terrains where residents usually build their houses. The higher the levee, the less exposed it is to the annual flood. However,

Figure 1: Ecological zones of the lower Amazonian floodplain (low water season).

levees may be unstable and prone to landslides (known locally as *fallen land)*, a phenomenon that leads to the loss of earth. In extreme cases, fallen land may drive whole communities away.

The floodplain is therefore characterized by two temporal variations: an annual cyclical flooding season and a unidirectional, long-term process of "grown" and "fallen" land. In both cases there is some level of unpredictability and major risks. Although annual flooding is predictable, its length and extent vary year to year. For example, the highest and lowest water seasons in the last decades were registered in 2009 and 2010, respectively.

Fertile soil, waterways, and diversity of natural resources have made the Amazonian floodplain an area long contested by different users. Earlier densely populated settlements turned into virtually empty spaces after epidemic outbreaks, slavery persecution and war during the early colonization stage (Roosevelt 1989). Only in the 18th century was the human occupation resumed in the floodplain, under asymmetric agrarian structure defined by a few historical factors. Floodplain farms were established with support from *sesmarias*, a policy that granted land titles to Portuguese immigrants during the Colonization period and was reinforced after the Independency by the Constitution of 1891 (Benatti et al. 2005). These landholders grew cocoa, which was suitable for the forest-shadowed levees and the floodplain's fertile soils, and brought cattle to graze on natural grasslands during the dry season (Gentil 1988; WinklerPrins 2006). Slavery abolishment

coincided with drop in competitive prices of cocoa towards the end of the 18th century. As a result, landholders transitioned to cattle as their main economic activity. According to Funes (1995), cattle ranching activity in the floodplain increased from 12% to 42% between the first and second half of 19th century. It was in this period that landless mixed peasants gradually moved to settle along the riverbanks. They developed a mixed subsistence economy based on annual crops, hunting, small-scale husbandry, fishing, wood collection for steam boats, and erratic work for landholders. However, the insurgent *Cabanagem* uprising that took place in the Amazon in the 1830s led to the massacre of a large number of the *caboclo* population including those living along the river (Harris 2010). The private system of the floodplain combined with relatively low population density gave support to a land accumulation process (Harris 2011) and the consolidation of the spatial configuration of floodplain farms surrounded by a few scattered riparian houses.

Throughout the 19th and 20th centuries, several economic cycles in the Amazon – such as rubber (Weinstein 1983), *jute* (Gentil 1988), and gold mining (Cleary 1990), along with governmental development policies (Bunker 1985) – triggered major demographic, social and territorial transformation in the region. In particular, the debt peonage system, emerged during the rubber boom, created dependency and inequality between a rural elite and mixed peasants (Schmink and Wood 1992). This system became pervasive in the region and was reproduced in different economic cycles. In the 1930s, for example, the jute boom brought to landholders and floodplain residents to similar economic dependency relation. Jute sharecropping and patronage systems consisted of land, input and market access provided by the landholder and labor force supplied by the residents (Gentil 1988). In 1934, the floodplain's private land regime was revoked by the national Constitution (Benatti et al. 2005). However, limited presence of the State combined with politically empowered landholders on one side, and poor local organization and a consolidated patronage system on the other, supported the continuity of private regime as a *de facto* land tenure system. Land transactions were maintained and even advertised in local newspapers (Castro 1999). During this period, economic relations between residents and landholders kept conflicts at bay.

After the decline of jute production in the early 1970s (WinklerPrins 2006), landholders turned to cattle ranching while residents engaged in commercial fisheries. Fishing was a subsistence activity that gradually became more economically important due to the growing fish market fostered by urbanization in the region. At the same time, commercial fishermen from other regions entered the floodplain lakes with more efficient fishing technologies, leading to conflicts with residents (McGrath et al. 1993). These conflicts coincided with the consolidation of community-based settlements in the Amazon, orchestrated by an educational program of the Catholic Church (MEB) (Lima 2009; Castro 2009). This self-governing structure gave foundation to the notion of community-based property rights of floodplain lakes, known locally as *fishing accords* (Castro and McGrath 2003).

Fishing accords, created in several communities during the 1980s and 1990s, are written documents in which rules regulating fishing activity and monitoring systems are drafted and brought to a vote in community meetings (Castro 1999). In the 1990s, this CBMS attracted the attention of researchers and governmental and non-governmental organizations as a genuine bottom-up solution for the commons dilemma. Inspired by the *commons* research and activism, several initiatives were developed in the Amazon Basin (Piñedo-Vasquez et al. 2011). In particular, local NGOs have initiated a gradual process to develop an integrated co-management of the floodplain system in Santarém in the 2000s. In 2005, as part of a national policy-oriented program for the Amazon governance (PPG-7), NGOs succeeded to push forward the implementation of a special territorial model designed for ethnic communities – the Agroextractive Project (AEP) (Castro 2012a). The AEP grants residents exclusive rights to use their resources and to manage them jointly with the State. Although the AEP addressed compatibility with the CBMS – *fishing accords* – it overlooked another layer of the local tenure system, which defines resource allocation and negotiation among residents and landholders.

3. Institutional diversity and local politics

Until recently, floodplain communities lacked legal rights to claim control over local resources. Nevertheless, community meetings were responsible for some decisions regarding access to and control over land and natural resources. At the same time, the powerful position of landholders guaranteed privileged access to some resources. Lakes and lowlands are of particular relevance in this analysis as they represent the two most economically important systems for local users. Residents use lakes for subsistence and commercial fishing, whereas lowlands are primarily used for cattle grazing by landholders and, more recently, by residents as well (McGrath et al. 2007). Lowlands and lakes physically overlap and their boundaries change according to the river level – one expands as the other retracts during the low and high water seasons. The continuous spatial reconfiguration of the two *commons* (lowlands and lakes), two contesting local actors (residents and landholders), and a range of economic activities are ingredients for an exceptionally complex tenure system for the floodplain.

According to formal legislation and policies, enacted by the Constitution of 1934, the national river floodplains are state property. Several laws and agencies are part of this legal framework. Land access is controlled by the State Heritage Office while the management and monitoring of floodplain resources is regulated by a set of national legislations (e.g. water, fishing, land and forest) under the umbrella of environmental agencies. In particular, Water Legislation allows residents to use local resources as long as their practices do not threaten public interest (Vierira 1992).

Due to the virtual absence of the State until recently, the private structure of the floodplain has remained unchanged. For instance, the clearing of floodplain forest

and land transactions persisted and intensified during the jute boom despite the establishment of state property rights (Castro 1999). State absence, on the other hand, opened space for local actors to shape their own ruling systems according to the socioenvironmental context. Only after national agencies increased their influence in environmental and territorial governance in Brazil during the last two decades, did the interplay between the local tenure systems and formal legislation collide. The CBMSs have been incorporated into co-management systems. However, another layer of the local ruling system that took shape during the reoccupation of the floodplain has been ignored.

3.1. Community-based management system

The community-based management system makes clear distinctions across four floodplain sub-systems. *Streams,* particularly river channels where the excludability of transportation and fishing boats is troublesome, are treated as open access. *Natural levees*, where houses and crop fields are located, are privately owned and can be sold, rented and inherited. Land transactions are locally formalized through hand-written documents in which the owner's name, property boundaries and price are recorded. The façade limits are clearly defined along the riverbank; backside limits may become sources of conflict due to divergent interpretations. Land and material losses caused by natural events (e.g. flooded gardens, landslides) are treated as private misfortunes without rights to compensation.

Lake systems and lowlands are held collectively. The former are ruled by residents through the fishing accords (Castro and McGrath 2003). Based on a concept of collective access and use rights, this CBMS emerged as a response to the perception of threat from intensified commercial lake fisheries (McGrath et al. 1993). Landholders sometimes supported fishing accords because they also benefitted from the monitoring system that indirectly hindered cattle piracy in their land.[2]

Fishing accords have proliferated throughout the region. In some cases, they present well elaborated rules of access, use, monitoring and sanctioning (Castro 1999). Until recently, however, they remained mostly fragmented, poorly formatted, often limited to single communities, and focused primarily on fishing resources (Castro and McGrath 2003). Although lake systems are managed collectively by residents, they cover large areas that emerge as grassland during the low water season and are therefore held privately by landholders. As a result, tension between collective and private access and use of these two overlapping systems leads to a subtle negotiation process between the two local users. This tension is reflected in a layer of social norms that mediate decisions regarding access.

[2] On the other hand, increased ranching activity among landholders fueled local conflicts with floodplain peasants who suffered from invasions of cattle into their gardens and fishing grounds

3.2. Social norms

The long-standing use of floodplain resources by residents and landholders forged cultural, social and economic bonds between them. Under an absent state, landholders took on the role of providing services and employment to residents in exchange for their control over the floodplain system. Oftentimes, landholders became godfathers of the residents' children and participated actively in community celebrations and meetings. Economic dependency established during the jute boom added to the social norms that mediated decisions about access to and use of the floodplain system for both local users. However, in contrast to the CBMS, which has been the key element in the residents' discourse, the social norms are hardly expressed and only surface when incidents over the interpretation of rights emerge.

In the past, local incidents were more frequent when social bonds between residents and landholders were relaxed. In the early 1900s, for instance, reports of local incidents over land tenure were commonplace in the local newspapers (Castro 1999). Ironically, local incidents declined after landholders lost their legal land rights in 1934, when the patronage system allowed the private property regime to remain as the *de facto* tenure. Only after the 1970s, when community-based organizations emerged in the floodplains, did the social relation between the two local users swing back to more conflictive interactions. Two factors contributed to this trend: 1) the increased political support of floodplain communities by religious groups, state and non-state agencies; and 2) the increasing engagement of residents in cattle raising activities. Below I describe a few local incidents observed in the 1990s in order to illustrate how social norms (controlled by landholders) tried to defy the rules established by the CBMS.[3]

Incident 1 – As described earlier, crop fields located on the *natural levees* are held privately under the CBMS. While damages caused by natural events are treated as individual misfortunes, material losses caused by third parties are expected to be compensated. Landholders, however, tend to refuse to compensate residents from recurrent crop damages caused by their cattle. Residents emphasize that cattle are not allowed in their private land, to which landholders retort that private gardens should be properly fenced. Therefore, these incidents tend to remain unsettled.

While unresolved incidents in the *natural levees* are more tolerated, cattle-related incidents on *lowlands* have led to more severe outcomes. Competition between landholders and residents over grasslands has recently increased. In particular, young residents have increasingly engaged in cattle partnership with outside ranchers. According to this informal arrangement, residents host and take care of a number of cattle in the floodplain grasslands during the low water season

[3] The analysis of incidents highlights local perception regarding access to and control of each sub-system, and the political position of each local actor. For a more detailed description of the incidents analyzed in this section, see Castro (1999).

and receive half of the newly born calves in exchange (Merry et al. 2004). Cattle partnership has made residents economically independent from landholders, and more prone to reclaim their collective rights to the lowlands. As a result, tension between private and collective claims to lowlands rose in the 1990s. One particular incident illustrates this issue.

Incident 2 – Landholders proposed a community rule to regulate the grassland leasing business in Ilha de Sao Miguel. According to the rule, each resident could host a limited number of heads according to the size of the *lowlands* located behind his or her house. The approval of this proposal showed that the community residents acknowledge the private tenure of lowlands. In contrast, the collective decision to ban water buffalo in the floodplain – due to severe environmental impact – has been repeatedly ignored by landholders.[4]

Contestation over lowlands is particularly stringent in grown land where property rights are still unclear. Such lands usually emerge as new islands close to communities. They are used by residents to farm and are eventually appropriated by landholders for cattle grazing. In three incidents observed in the 1990s, external support from a grassroots organization was instrumental in supporting residents' struggles to maintain their access to the island.

Incident 3 – A landholder claimed his exclusive rights to an island formerly shared with fifteen residents. Most of the users left the area immediately in deference to the landholder's request. However, 2 years later – with support from the Rural Workers' Union – two residents won a court case and were granted right-of-use.

Incident 4 – In 1959 a landholder was granted exclusive rights to an island of approximately two hectares, which he shared with several residents. Through the sedimentation process over the years, the island grew considerably to 250 hectares. In 1994 the landholder claimed exclusive use rights to the whole island. Supported by the Fishermen's Union, the residents filed a suit against the landholder and won their rights-to-use to manage the island collectively while the landholder was only granted exclusive use rights to the original two hectares.

Incident 5 – A landholder shared an island with a few residents for over two decades. After the death of the landholder, the property rights to the island became a source of conflict. The heir claimed exclusive access to the island and, similar to the cases described above, the residents – with support from the Fishermen's Union – were granted exclusive collective use rights.

The three cases above illustrate the continuous contestation over grown land. It also reveals that landholders strive to keep private control over lowlands while granting access to residents. Perception of private rights is sometimes shared by residents who comply with the landholders' decision. Their recent engagement

[4] Community residents argue that water buffaloes lead to soil compaction, crop damage and the destruction of fishing grounds.

in cattle ranching combined with external political support have empowered residents to reclaim their collective rights to lowlands.

In contrast, conflicts related to access to and control over *lake systems* are less severe since landholders have less economic interest in this sub-system. Nevertheless, although lake management is the flagship of CBMS in the region, claims by landholders for private ownership of lakes were observed on a few occasions, both in discourse and action.

Incident 6 – A landholder allowed his guests to violate a community-based fishing rule. In his defense, he alleged that the lake in question was located within *his* property. In another case, a landholder claimed to have exclusive rights to make use of locally banned fishing gear in *his water*. In both cases, after several discussions, the community finally accepted the landholders' claims, showing some level of common understanding of the private tenure of lakes that are enclosed in one's landholding during the low water season.

However, less reconciliatory incidents emerge when landholders' claims have an impact on the economic interests of the residents, as illustrated by the incident described below.

Incident 7 – A landholder requested exclusive rights to commercially exploit the pirarucu (*Arapaima gigas*), a high-priced fish collectively managed in a lake located within *her* property. After a bitter negotiation process, the two parties agreed to keep the community rights to the managed species with the condition to sell the catch exclusively to the landholder in exchange for her support of the community-based management of *her* lake. Possessive pronouns (his, her) are frequent signs of boundaries for access, control and management rights in the local discourse.

Two incidents reveal how private ownership of aquatic system is also in residents' perception.

Incident 8 – In one fishing accord, it was decided that those who did not comply with the local rules would be allowed to fish only in *their* water (i.e. in the area adjacent to their landholding).

Incident 9 – During a participatory mapping exercise, a focus group of residents drew landholding boundaries on a satellite image taken during the high water season. Some of the boundary lines crossed over the middle of lakes. They explained that the lines represented the division of lowlands, which could be seen only during the low water season. Therefore, although residents perceive the collective access to lakes for fishing purposes during the high water season, they seem to be aware of private boundaries based on the landscape configuration during the low water season.

The notion of private rights to aquatic system in the residents' perception clearly illustrates that, while ecological factors influence the pattern of collective access and management rights to this subsystem, political factors define private control over decisions. This nuanced variation between the two local actors regarding the bundle of rights has major implications for the implementation of a new territorial model in the floodplain.

4. A new territorial model under old social relations

In 2006, the Agro-Extractive Settlement Project (AEP)[5] was implemented in the Lower Amazon to provide legal grounds for the CBMS. The AEP is a territorial model based on four main pillars: 1) social justice for local residents; 2) exclusive collective land use rights for local residents by means of a (renewable) concession contract of 10 years; 3) a participatory collective Management Plan; and 4) the provision of small grants, credit lines and technical assistance to establish basic infrastructure for sustainable production systems.

As a territorial-environmental model, the AEP is defined by ecological, cultural and socioeconomic criteria. In the Amazonian floodplain, the AEP boundaries are defined according to a lake system and its surrounding floodplain. All community residents, based on their ethnic background (*caboclo*), are entitled to live in an AEP and to all benefits therein.[6] Landholders, on the other hand, are disentitled from their (informal) landholdings. Their access to and use of the floodplain resources will depend on formal permission from the AEP Council, composed of a representative from each community. This way, the AEPs are expected to foster change in the local power structure that has taken shape over the last two centuries, and to strengthen the bottom-up community-based management systems developed over the last few decades.

A Management Plan formulated in collaboration with local communities and state agencies is expected to regulate access to and use of local natural resources. The CBMS *fishing accords* are to be incorporated into the Management Plan and monitored by the AEP Council, a cross-community organization run by local representatives. As evoked by the settlement model, agro-extractive activities such as artisanal fishing, agroforestry and small-scale farming systems are the core of the local socioeconomy foreseen for the residents. In contrast, cattle ranching is expected to be limited.

In summary, the management of the floodplain has evolved from a fragmented, informal ruling system with limited state support to a consolidated territorial governance that includes state and non-state actors. In particular, the land tenure system of an AEP implies a major change in the political positions of the two local users. Under this new territorial model, the *de facto* private tenure system was to be replaced by a formal collective system that granted exclusive use concession to community residents. It was to be regulated by a participatory management plan, which would incorporate the fishing accords monitored and regulated by the AEP Council and the Management Plan. By revoking the *de facto* private land tenure in the floodplain, landholders' protagonist role in the decision-making process should change to one of authorized user. The formal recognition of residents to oversee the AEP was expected to give them the power to decide if and how landholders

[5] AEP from the Portuguese PAE – "Projeto de Assentamento Agroextrativista".

[6] Community residents employed by the State (e.g. teachers, health agents, environmental agents) are not eligible for financial benefits such as small grants, credit lines and technical assistance.

could use the floodplain system. Therefore, the establishment of the AEP implied a major change in the political position of the two local actors. Residents became legally recognized as the territory overseers who decide how and by whom the natural resources should be accessed and used.

Needless to say, the implementation of the AEPs found major resistance among landholders. An informant from the Rural Producers Union at Santarem (SIRSAN), which represents cattle ranchers, held that the implementation of AEPs in the region characterized "a disguised authoritarian process to steal land from producers". In his opinion, landholders were mistakenly treated as land grabbers who had illegally appropriated the floodplain land. He argued that landholders had acquired their properties through the same *de facto* land market as residents. He also criticized the image of "large ranchers" that was used to refer to floodplain landholders. He contended that an internal report prepared by the state agricultural agency revealed an average herd size of 80 heads per landholding in the floodplain, and only 5% of landholdings with more than 300 heads. Despite their relatively small scale ranching activity, landholders have been excluded from the new territorial model and disregarded as legitimate users.

After several failed attempts to reverse the process, landholders went quiet and withdrew from public meetings. Those involved in the implementation process interpreted landholders' behavior as a victory of the co-management system. Nevertheless, they admitted that landholders were not ready to hand over their power to residents, and that land incidents were expected to emerge at a later stage. Despite the landholders' dissatisfaction, the number of incidents registered between the two local users was surprisingly low in the first three years of the implementation process. Only a few official complaints were turned in to the government office. Although the undisturbed process might reflect agreements reached between residents and landholders – the outcome envisaged by the AEP – practitioners and state agents mentioned three other less desirable reasons driving this apparent smooth process. First, residents were busy dealing with their financial benefits (e.g. credits, grants, and infrastructure) and paid little attention to landholders' violation. Secondly, most of the AEP Councils were not organized enough to mobilize and confront violations from landholders. Third, some residents may still regard landholders as legitimate and powerful local users.

The last two reasons are particularly relevant to local social relations and the images of land tenure among local users, illustrated by one incident.

Incident 10 – One of the most well organized AEP Councils (Aritapera) tried to apply their new territorial rules to solve a last-longing land conflict between residents and landholders in one community. The state agent in charge of the AEP implementation explains with frustration the way the Council formulated the formal complaint:

> "The most capable leader of the community sends to us [state agency] a formal proposal requesting that the landowner donate half of his land to the Council as a way to resolve the land conflict. The appropriate proposal should be framed

> the other way around, that the Council would grant the user (not landowner!) half of the land he had illegally appropriated. If the local residents' perception of property rights will not change, it will be difficult to see a real change on the ground" (*my translation and my emphasis*).

Despite the persistent image of 'landowner', the outcome has shown some level of residents' empowerment. Initially, the landholder reacted to the residents' demands with threats and sought support from influential politicians. After failing to reach his goal, he turned to negotiation and agreed to allocate half of the area to several residents to farm. Therefore, in more organized communities, landholders had to change their formerly resistant position to a negotiating strategy in order to adapt to the new institutional arrangement. In less organized communities, however, local politics remain a major barrier to change land tenure.

The implementation of AEPs has also not been effective in completely stopping the *de facto* land transactions. Under the new land tenure arrangements, residents do not hold alienation rights to their territory. However, interviews with local leaders reveal that land trade persists as a local practice among both residents and landholders.

The practices observed in well-organized communities show that contradictions between the new formal territorial model and the old *de facto* tenure system do not only occur in communities that lack institutional capacity. Virtually all communities seem to face challenges in replacing the asymmetric *de facto* private tenure with the collective land tenure system installed by the AEP. In short, despite the promises of the new formal tenure system to empower residents, landholders rely on local perceptions to maintain access to their appropriated land under the new territorial model. In some cases, residents cannot break the social norms controlled by landholders due to limited organizational capacity. In other cases, residents and landholders still share the *de facto* tenure system grounded in asymmetric social relations.

5. Moving beyond the CBMS and the commoners

The theory of the *commons* combines a local perspective of cultural ecology with a broader perspective of political ecology. The former emphasizes the local ecological and social context that influences the emergence of CBMSs (e.g. Netting 1976; McCay and Acheson 1987; Ostrom 1990). The latter addresses the broad social, economic and political context that shapes struggles over access and control of natural resources (e.g. Peters 1994; Edwards and Steins 1999; Dietz and Henry 2008). Both perspectives have been instrumental in offering a solid analytical framework for understanding how collective actions emerge and are transformed. However, it offers limited insights into how multiple resource appropriation regimes are reconfigured and negotiated under heterogeneous and changing socioenvironmental systems. CBMSs are usually embedded at multiple socioenvironmental levels, in which power relations play a major role (Ribot and

Peluso 2003). A close look at local social interactions with temporal and spatial depth is needed in order to better understand how asymmetric relations shape tenure arrangements among local users (Agrawal and Gibson 1999). Political life in rural communities goes beyond formal and concerted collective efforts. It combines subtle everyday life interactions, ranging from support to resistance (Kerkvliet 2009). The Amazonian floodplain case offers a unique opportunity to explore these conceptual shortcomings in the commons research. It adds temporal, spatial and institutional diversity into the analysis of everyday life politics and the implications on the local tenure arrangement.

The analysis of the floodplain territorial governance in the Lower Amazon reveals different layers of land tenure. Under the official legislation, designed and regulated by national agencies influenced by large-scale political demands, two layers of tenure and management systems driven by historical, socioeconomic and political factors overlap and interact over space and time – the CBMS, focused on the local socioenvironmental context, primarily related to fisheries and secondarily to other floodplain resources; and a more implicit ruling system mediated by economic and social relations between residents and landholders.

The two-layered local floodplain tenure system reveals patterns of resource appropriation that play out at different levels. The *fishing accord* is an explicit ruling system controlled by residents to claim collective rights to lakes and, more recently, to the lowlands. Grounded in the social capital built over time, this CBMS emerged as a local solution to external pressure from fishing encroachment. Supported by the political structure developed by the Catholic Church and later by NGOs, the CBMS was relatively successful in limiting resource access and use from outsiders. Underneath the CBMS lies an implicit ruling system controlled by landholders, which is triggered whenever their privileged access is under threat. Supported by asymmetric relations emerged from land tenure privileges in the 18th century and later deepened by economic dependency relations, these norms have been successful in regulating resource access among local users.

While conflicts with outside fishermen take place in the form of verbal and physical confrontations, contestations over control of and access to natural resources involving residents and landholders often take place in the form of subtle negotiations. Social bonds between the two local users make open conflicts costly for residents (Castro 2002). Therefore, the *fishing accords* have been more successful when the rules do not jeopardize landholders' benefits; otherwise, they are overruled by social norms. In other words, although *access* to "collective" resources – e.g. lakes and grasslands – may be maintained among both local actors, landholders strive to maintain *control* over use of these resources. Only when residents are empowered to confront and even to overcome local power asymmetries do the tensions between CBMS and the social norms become more evident and yields more frequent incidents.

This dual floodplain tenure system observed in the Lower Amazon challenges unidimensional perspectives of the *commons*. If treated as the only local management system in place, the CBMS conforms to the *cultural ecology* model,

which addresses collective action as an adaptive process driven by the ecological and economic attributes of the ecosystem and resource units (Netting 1976). The *fishing accord* is influenced by the ecological patchiness generated from the annual water fluctuation, leading to a spatially and temporally variable property rights system. In particular, the permeability of boundaries and highly dispersed (grass) or fugitive (fish) resources make individual rights of lake and lowlands troublesome (McGrath et al. 2008). Similar explanations have been proposed by other authors. Thomas (1996) describes how the floodplains tenure system in Nigeria spatially varies according to level of concentration, predictability and mobility of resources. Vondal (1987) explains how seasonality influences changes in appropriation regime in the same physical area in the swampland in Borneo, where lakes that were collectively shared during the high water season turned into privately owned cropland during the low water season.

Although the CBMS fits well within this adaptive model, social norms mediating the reinterpretation of property rights at the local level can only be explained by local power asymmetry and shared local perceptions of floodplain tenure among different local users. The history of the floodplain occupation shows that landholders have succeeded in maintaining control over floodplain resources even after the revocation of private regime by accommodating a *de facto* ruling system. The implementation of AEP signals a new round in this process. This new territorial model represents a unique opportunity to change the local power structure through a co-management system to reconcile the national legal framework with the local ruling system. Although this strategy is in line with the theory of the commons (Ostrom 1990; Jentoft et al. 1998; Berkes and Folke 2000), it overlooks veiled social norms that have outlived several institutional innovations and helped to maintain landholders' privileges.

Co-management initiatives emphasize the local ruling systems that are expressed through collective action. On the other hand, little attention is devoted to more subtle social norms embedded in local social relations. The invisibility of such norms among policy makers, practitioners and researchers reflects an incomplete contextualization of the local tenure system. Residents have exerted agency through community organization, conservationist discourse and attracting external support in order to exclude outsiders (Castro 2012b). However, they have not been able to overcome local structural power relations that supports the local governance of floodplain resources among residents and landholders.

CBMS research and practice must go beyond the analysis of how commoners work together, and how collective institutional arrangements are crafted. CBMS is ingrained in multiple ecological, economic and institutional repertoires (Cleaver 2002). Therefore, in order to better understand the potential and limitations of such local institutions, a temporal, spatial and social depth is needed. More importantly, it is fundamental to account for everyday life practices to reveal how local rules are continuously contested and negotiated between different actors under asymmetric relations in order to adapt to environmental, market and institutional changes.

6. Conclusions: politicizing the commons

CBMS research usually focuses on features of the commoners, attributes of single managed ecosystems and resource units, and single local tenure systems. However, CBMS represents only part of a more complex system shaped by the ecological and social contexts faced by different local actors. The limited focus on CBMS and on the commoners may hide the political process that shapes the appropriation of the *commons* among local users. These actors negotiate access to and control over natural resources under socioenvironmental, socioeconomic and institutional diversity. Revealing diversity of ruling systems and everyday life practices that mediate these interactions is fundamental for understanding how the *commons* are used and managed at the local level. A micro-political contextualization of the commons is needed not only for theoretical reasons but also to better unveil potentialities and shortcomings for the legal recognition of sustainable and robust CBMSs. The Lower Amazonian floodplain case reveals how the land tenure arrangement has been influenced by a range of external and local factors. While external economic, demographic, political factors have strongly created new pressures on the floodplain resources, local environmental and social diversity and change have been particularly relevant in shaping interaction between two local actors and their agency. To assume that the integration of "visible" local management systems into a formal legal framework is sufficient to achieve an efficient co-management system is rather simplistic. Despite major structural changes in the formal tenure framework, power relations between different local users may remain unchanged if local perceptions and everyday life practices of power relations are maintained. The success of a co-management system depends on the degree of compatibility with other layers of property rights and on whether or not it addresses local power asymmetries. Therefore, a diachronic analysis of local social interactions beyond commoners and the CBMS is crucial to reveal how socioenvironmental and institutional diversity may shape constraints and opportunities for a truly participatory and democratic local governance of natural resources.

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