SPATIALITIES OF THE AMAZONIAN FLOODPLAINS: THE CASES OF AFUÁ, MOCAJUBA AND BELÉM

ESPACIALIDADES DA VÁRZEA AMAZÔNICA: OS CASOS DE AFUÁ, MOCAJUBA E BELÉM

ESPACIALIDADES DE BOSQUE DE INUNDACIÓN AMAZONICA: LOS CASOS DE AFUÁ, MOCAJUBA Y BELÉM

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Abstract

This article is dedicated to characterizing a spatial repertoire belonging to the Amazonian floodplains, in order to discuss how these territories have been assimilated by the exogenous logic of contemporary urbanization. The text examines the spatial characteristics of the floodplain occupation based on three cases: Belém, the metropolitan pole; Mocajuba, a municipality affected by the Tucuruí dam, and Afuá, a riverine municipality in the Marajó archipelago, to explore the analogies of occupation in the three scales of agglomeration. Amongst the cases analyzed, the dialectical link is identified between the countryside and the city within the diversity of trajectories: the floodplain typologies occupied the lowlands of the capital and, stigmatized as a space of poverty and precariousness, justified the landfills and macro drainage, thereby nourishing the desire to modernize the urban floodplains of the small Afuá, or the villages of Mocajuba, which had previously supported the abundant, resilient riverine life.

Key-Words: *Amazonian floodplains; spatial repertoire; Afuá; Mocajuba; Combu Island; Belém*

Resumo

Este artigo dedica-se à caracterização de um repertório espacial próprio de regiões de várzea amazônica, para discutir a assimilação dos territórios da várzea pela lógica exógena de urbanização contemporânea. O texto caracteriza espacialmente a ocupação de várzea a partir de três casos: Belém, polo metropolitano; Mocajuba, município afetado pela UHE Tucuruí, e Afuá, município ribeirinho do arquipélago do Marajó, para explorar analogias de ocupação nas três escalas de aglomeração. Dentre os casos analisados, evidencia-se a articulação dialética entre campo e cidade em diversas trajetórias: as tipologias de várzea ocuparam as baixadas da capital e, estigmatizadas como espaço da pobreza e precariedade, justificaram aterros e macrodrenagens, alimentando o desejo de modernizar as várzeas urbanas da pequena Afuá, ou das vilas de Mocajuba, que davam suporte à abundante e resiliente vida ribeirinha.

Palavras-Chave: várzea amazônica; repertório espacial; Afuá; Mocajuba; Ilha do Combu; Belém

Resumen

Este artículo está dedicado a la caracterización de un repertorio espacial propio de las regiones de los terreno bajos del Amazonas, para discutir la asimilación de los territorios de las tierras bajas por la lógica exógena de la urbanización contemporánea. El texto caracteriza espacialmente la ocupación de bosque de inundación basada en tres casos: Belém, polo metropolitano; Mocajuba, municipio afectado por la presa de Tucuruí, y Afuá, un municipio ribereño en el archipiélago de Marajó, para explorar analogías de ocupación en las tres escalas de aglomeración. Entre los casos analizados, la articulación dialéctica entre el campo y la ciudad se evidencia en diferentes trayectorias: las tipologías de llanuras de inundación ocuparon las tierras bajas de la capital y, estigmatizadas como un espacio de pobreza y precariedad, justificaron vertederos y macro-drenajes, alimentando el deseo de modernizar de bosque inundación urbanas de la pequeña Afuá, o los pueblos de Mocajuba, que apoyaron la abundante y resistente vida ribereña.

Palabras clave: *bosque de inundación amazônico; repertorio espacial; Afuá; Mocajuba; Isla Combu; Belem*

1. Introduction

This article is dedicated to characterizing a specific spatial repertoire belonging to the Amazon floodplain1 regions, in order to discuss how the floodplain territories have been assimilated by the exogenous logic of contemporary urbanization. For centuries, the coexistence of people and forest has been able to create a distinct distribution of human settlements, a type of human-natural system, typical of anthropogenic biomes (CLEMENT *et al*, 2015). This has resulted in a population dispersion matrix throughout small settlements, which have increasingly become linked to cities through transport logistics, thereby being able to convey the production of activities from the exploitation of natural resources or agribusiness, and to guide urban expansion.

In the search for this repertoire, the starting point adopted by this text was this imbrication between inhabitants and nature, so as to investigate the forms in which the settlements have become occupied, where the natural environment is a space for the production and reproduction of life, and the appropriation of territory has included spatial solutions and typologies at an affordable cost, with a low environmental impact. This logic commonly stands in opposition to the alternatives put forward by public policies, which are guided by modern thought that separates people and nature and cultural ruptures, and which have brought to the established populations migrant groups that view land as a means of production or investment.

The direct application of the premises of the capitalist consumer society, which comprehends land as a commodity and natural resources as assets to be exploited to the point of exhaustion, penalizes the populations that have co-evolved with the territory, and that possess knowledge on how to manage and adapt to the long cycles of nature. On the other hand, the deprivation of basic services (energy, sanitation, mobility) for populations spread throughout the forest, or far from the major centers, is still a challenge for Brazil in the twenty-first century, and necessitates a link between old knowledge and new technologies.

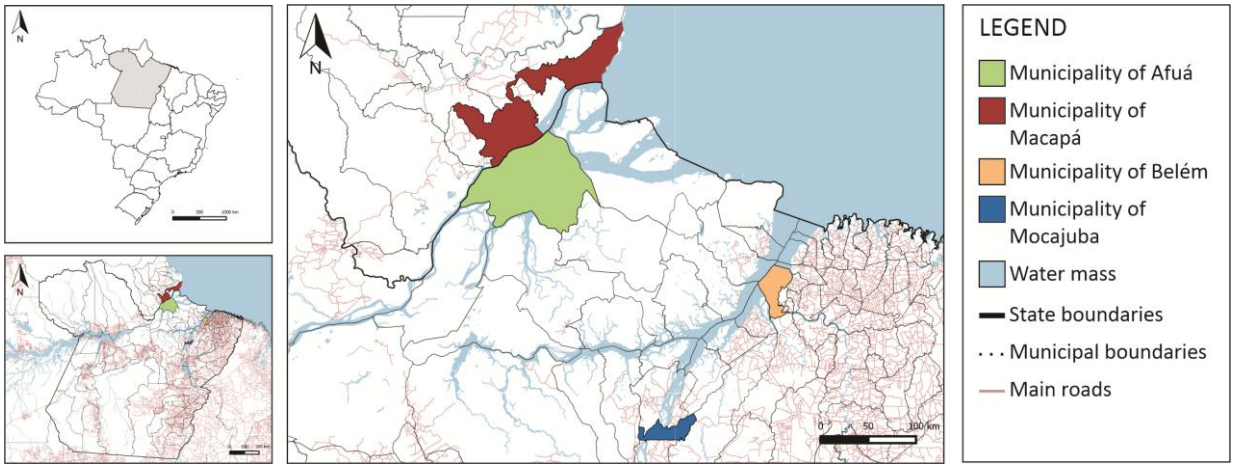
In the Amazon, the coexistence of urban, rural, and natural environments indicates that economic and spatial integration has not yet brought about a complete transformation of the ways of life (from the mercantile/extractive to the industrial), nor has it enabled full control over nature, as required by industrial logic. There is a need for an integrated approach towards urban and rural processes (CARDOSO; LIMA, 2006; CASTRO, 2009, SAIDLER, 2015; CARDOSO *et al*, 2018) owing to the direct connection between industrial processes and rural areas, or with rural restructuring processes, which strongly impact cities and towns that begin to accommodate the inhabitants expelled from their territories in precarious peripheries.

This reality, so commonplace in the territorial formation of Brazil, is still seen as inexorable by public policies focused on economic growth, based on socio-environmental degradation and exclusion. This text presents the occupation of the floodplain based on three cases: Belém, the metropolitan pole; Mocajuba, a municipality affected by the Tucuruí hydroelectric power plant (HPP), and Afuá, a riverine municipality in the Marajó archipelago, in order to explore the analogies of occupation in the three scales of agglomeration (see locations in Figure 1), investigated in field surveys conducted in 2017 (Belém and Afuá), 2018 (Belém and Mocajuba) and 2019 (Belém, Mocajuba and Afuá), and supported by a literature review in order to indicate other possibilities. This has been registered due to the rapid disappearance and metamorphosis of endogenous solutions, in view of the progressive adoption of city or metropolitan solutions for land use and occupation by public interventions linked to federal policies,

[1] In summary, the floodplains (*várzeas* or *igapó alto* in Portuguese) are strips of land that border the rivers, of recent sedimentary formation, and which periodically become full. The floodplain is configured as being the opposite of terra firma, and each of these landscapes has a conditioning influence with adaptive and productive strategies within the Amazon context, as well as regional identities (CANTO, 2007; STERNBERG, 1998).

as has occurred, for example, with the intervention of the *Minha Casa Minha Vida* (My Home, My Life) Program in the remaining quilombo communities in the Tocantins River floodplain area (OLIVEIRA, 2020).

Figure 1: The location of the municipalities of Afuá, Macapá, Belém and Mocajuba.



Source: IBGE (2010). Produced by the authors.

2. The floodplain as the new frontier of capital expansion in the Amazon: ongoing extensive urbanization

Until 1950, the river was the main form of territorial connection in the Amazon. Cities and towns had been located along the banks of the rivers, inserted into or near the floodplains, which for centuries were regarded as territories with an abundance of resources and opportunities (STOLL, 2014). After 1950, the Amazon became incorporated into the rest of the country as an expansion area of the capitalist frontier, becoming physically integrated into the country by roads, and incorporated into the national land market (CORRÊA, 1987).

Rivers, forests, soil and subsoil were included in projects for the exploitation of minerals, energy, agriculture and timber, thereby conflicting with the centuries-old established populations (PORTO-GONÇALVES, 2005), and bringing about extensive urbanization[2], which initially assimilated areas of terra firma, and during the last decade has advanced across the floodplain for the exploration of timber and tourism, açaí monoculture and real estate expansion (TAGORE, CANTO, VASCONCELLOS SOBRINHO, 2018; BIBAS, 2018).

Table 1 presents some of the attributes of the municipalities studied in order to situate and distinguish them regarding the transformation process of their floodplains (population data, conditions of accessibility to the floodplain from the mainland continent, the extent of urban sprawl and density). The condition of being a state capital and metropolis for over 400 years has had repercussions on 65.14% of the islands within its territory (BELÉM, 2012), favoring virtuous economic arrangements between agro-extractive populations and the continental market. In Mocajuba, the historic transhumance (population movement between the municipal seat, floodplains/terra firma according to the season) has begun to change and is less dynamic. In Afuá, the proximity to Macapá, state capital of Amapá, has changed the consumption conditions, despite the solely waterway access, the predominance of the stilt houses and the historical dependence on extractivism.

[2] A process of extensive urbanization has taken place in the region, understood as one that goes beyond the limits of the city, and "virtually" encompasses multiple spaces, creating regional and global networks linked to capitalist forms of space appropriation. The city, as a physical structure, does not completely reach all places, but urban processes, thoughts, customs, forms of construction (physical, social) have surpassed (although to differing degrees) the city, and have integrated so-called rural spaces (MONTE-MÓR, 1994).

Table 1: Demographic and spatial characteristics of the studied municipalities.

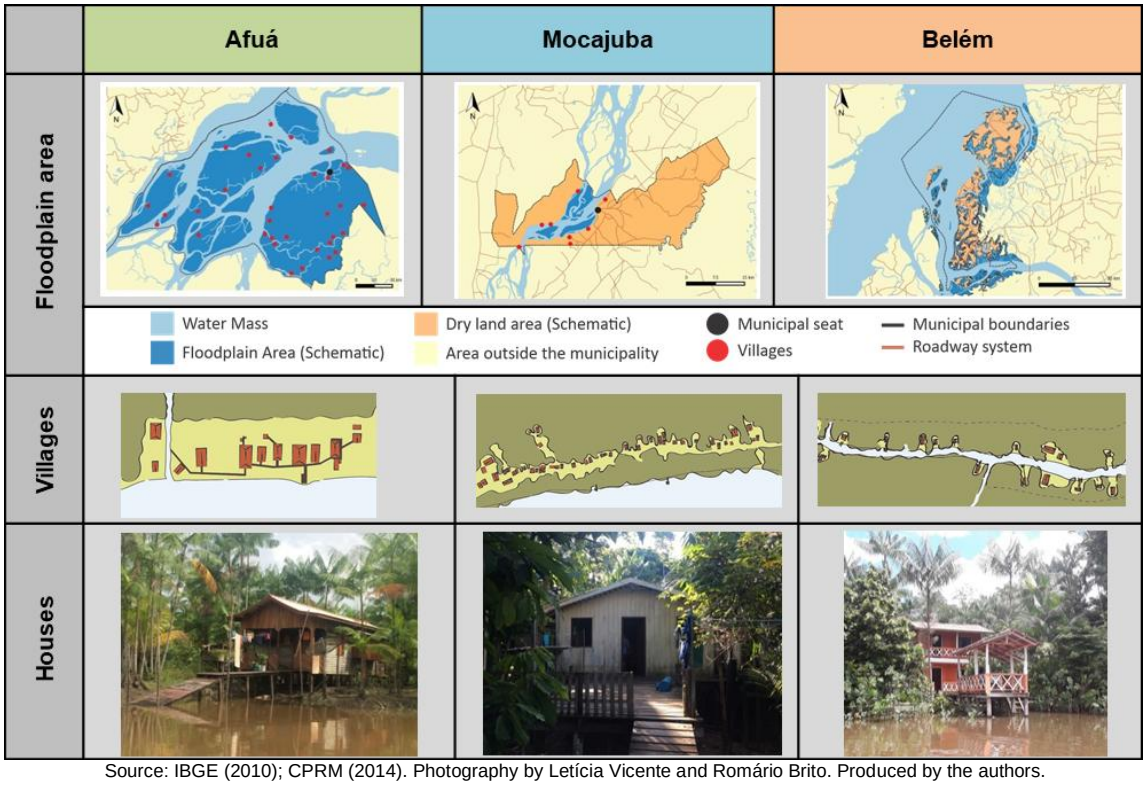
		Afuá (1890)	Mocajuba (1895)	Belém (1616)
Access	Connection	By river or by light aircraft. Travel between the municipal seat and villages.	By road or by river. Travel between the municipal seat and the villages (on the islands) by river.	By road, by river or by air. Travel between the municipal seat and the islands by river and by bridge (on the Mosqueiro and Outeiro Islands).
	Distance	Routes: Afuá – Macapá 74km in a straight line; Afuá – Belém 265.75 km.	Route: Mocajuba – Belém 167.15 km in a straight line; 186 km by road.	To the most populated islands: Center of Belém – Mosqueiro 70 km by road; Center of Belém – Outeiro 30 km by road; Icoaraci neighborhood – Cotijuba 8km in a straight line by river; Center of Belém – Combu 1.5 km in a straight line by river.
	Travelling time	Travel time to capital: Afuá – Macapá - 4hrs by boat or 2 hrs by speed boat; Afuá – Belém – 36 hrs by boat.	Travel time to the capital: mocajuba – Belém 4 hrs by car.	Traveling time to the most populated islands: Center of Belém – Mosqueiro 1h 30min by car; Center of Belém – Outeiro 1hr by car; Icoaraci neighborhood – Cotijuba 40 mins by boat; Princesa Isabel Square – Combu 15 – 20 mins by boat.
Population data	Total	35,042 pop. (IBGE, 2010).	26,731 pop. (IBGE, 2010).	1,393,339 pop. (IBGE, 2010).
	Urban	27% (IBGE, 2010).	68% (IBGE, 2010).	99% (IBGE, 2010).
Territorial data	Municipal area	8,372 km2 (IBGE, 2010). Total area land + water.	870.8 km2 (IBGE, 2010). Total area land and water.	1,059,4 km2 (IBGE,2010). Total area land + water.
	Urban sprawl	1.30 km2 (0.01% of the municipal territory) – urban area only in the municipal seat (approximate measurement of the capital).	4.30 km2 (0.49% of the municipal territory) – urban area only in the municipal seat (approximate measurement of the capital).	187.61 km2 (17.70% of the municipal territory) with 52.7 km2 on the islands – urban area on the continent and on part of the islands of Mosqueiro, Outeiro and Cotijuba (measurement of the urban zones established in the Master Plan).
	Population density	4.19 pop/ km2 (IBGE, 2010).	30.79 pop/ km2 (IBGE, 2010).	1315.27 pop/ km2 (IBGE, 2010

Source: IBGE, 2010; www.google.com.br/maps. Produced by the authors.

The transformation of the floodplain into the last exploration frontier by capital challenges geomorphological conditions and regular flooding, previously considered a difficult solution for pioneering migrants, due to the high cost of reclaiming land and macro-drainage works associated with their urban or periurban economic use (holiday homes, club condominiums, resorts, restaurants, and spaces geared towards tourism, precarious settlements). Table 2 presents a schematic diagram of the extension of the floodplain in each municipality, and the spatial arrangements linked to the three

individual cases, highlighting the island floodplain as the space representing the greatest resistance for traditional occupations in the capital, but having been greatly affected by the provision of electricity and solutions transport (bridges, public river transport, community transport). It should be remembered that since the eighteenth century, Amazonian villages and cities have been spaces for local street markets and covered markets for the products from their areas of influence. The floodplains have always been inhabited and productive, with floodplain residents making daily contact ("to and fro" movement in individual boats) with the street markets in nearby towns, which also allowed them access to education and health services, participation in religious festivities, etc., even though this trajectory becomes differentiated according to the functions and importance of the city.

Table 2: Extension and settlements on the floodplains of the studied cases.



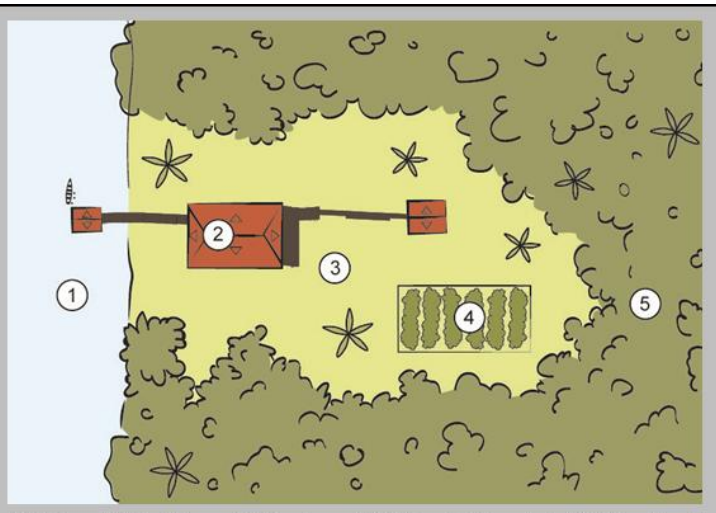
Source: IBGE (2010); CPRM (2014). Photography by Letícia Vicente and Romário Brito. Produced by the authors.

In the metropolitan case, since the second half of the twentieth century, the continental floodplain has been an alternative for the excluded social groups (informal occupation of the "lowlands" of Belém), while historically, the islands have been a space for what was considered undesirable uses on the mainland (e.g. prison), a place of agro-extractive production (with products for local gastronomy), or spaces for second homes and leisure near the beaches (BRITO, 2019; VICENTE, CARDOSO, 2018). On the larger islands, urban uses have occupied locations with terra firma sites, while in the floodplain areas traditional uses have been maintained.

Mocajuba is an example of Tocantina culture, very old in the region, where the interdependence between the municipal seat, villages and spaces of terra firma dedicated to agriculture has always existed, and it was common for families to have homes/support in all these spaces. In the city, the floodplain was a typical production space based on the river-woodland-vegetable patch-backyard system (see Table 3), and it is only over the past 20 years that this arrangement has been broken, and younger generations have confined themselves just to the city. Factors such as chemical changes in the waters, reduction of fish volume, after the construction of the dam at the Tucuruí hydroelectric power plant in the 1980s, plus the offer of credit for the production of pepper on terra firma, the opening

up of highways and the technological precariousness of production and life on the floodplain have all been presented as justification for the permanent transfer of families to the city (CORRÊA, 2018).

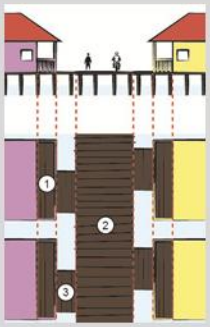
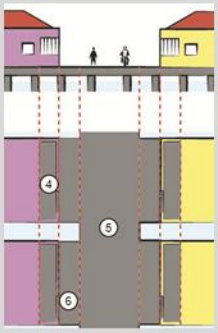
Table 3: Schematic diagram of the spatial arrangement of a floodplain family.

	For centuries, the distribution of human settlements in the Amazon has been linked to the river. From the floodplains, an organizational pattern was established, which Porto-Gonçalves (2005) called river-floodplain-forest, and that Loureiro (2014) called river – woodland – vegetable patch – backyard. The river is used for fishing, obtaining water, and moving around; the backyard is for collecting fruit, medicinal plants, raising animals; the vegetable patch is for planting food and the woodlands for extractivism and hunting.

Source: Brito (2019). Produced by the authors.

Afuá illustrates the dynamics of the Marajoara floodplain. The municipal seat was built completely on the floodplain, where the population has also built its homes (stilt houses) and “streets” (wooden passageways), and incorporated the waters into the daily dynamics. The villages are typical riverine settlements of the region (as presented in Table 3), which according to the most recent census, are home to most of the municipality's population (IBGE, 2010). However, the possibility of fast transportation from Macapá, the scarcity of wood (exploited for export), migrating from extractivism to temporary wages in logging or palm heart companies, are at the core of the profound changes that have taken place in the municipal seat, demonstrating a tendency to break away from the waters, replacing wood with concrete, building concrete slabs under the houses emulating lots and preventing contact with the waters (BIBAS, 2018). In the Marajó archipelago, the access obtained by small municipalities to investments in energy distribution, housing and paving, during the first decades of the twenty-first century, have contributed to adhering to a particular type of developmentalism, which has ceased using wooden plank passageways and contact with the waters in favor of concrete and asphalt (BIBAS, 2018). Table 4 presents diagrams of this ongoing transformation, and offers spatial parallels to the Lowlands of Belém (in the metropolis), where wooden plank passageways are associated with extreme poverty and precariousness, and landfills and macro-drainage have been up as the only possible strategy for consolidating occupation by its residents. The photographs express the common spatial language in different floodplain contexts, of contaminated water and population densities in the Tucunduba Basin in Belém and the vernacular occupation in waters influenced by the ocean tides of the Cajari River in Afuá. The condition of urban floodplains indicates a tendency that avoids contact with water, in response to a conception of development that does not dialogue with the everyday reality of the population of Afuá.

Table 4: Diagrams and images of how the wooden passageways in Afuá have been transformed and become disconnected form the river and the references of Belém.

Wooden passageways and transition spaces	Afuá (2016 e 2019)	Belém (2000)
 ① Patio (wood) ② Passageway (wood) ③ Transition space	 Wooden passageways in the municipal seat of Afuá Photography Thales Miranda (2019).	 Wooden passageways in Belém (continent) Photography Marcos Bittencourt (2000).
Concrete passageways and slabs  ④ Patio (concrete) ⑤ Passageway (concrete) ⑥ Concrete slabs	 Concrete slabs in the municipal slabs of Afuá Photography Luna Bibas (2016).	 Earth filled street in Belém (mainland) Photography Marcos Bittencourt (2000).

Source: Bibas (2018); Cardoso (2002). Produced by the authors.

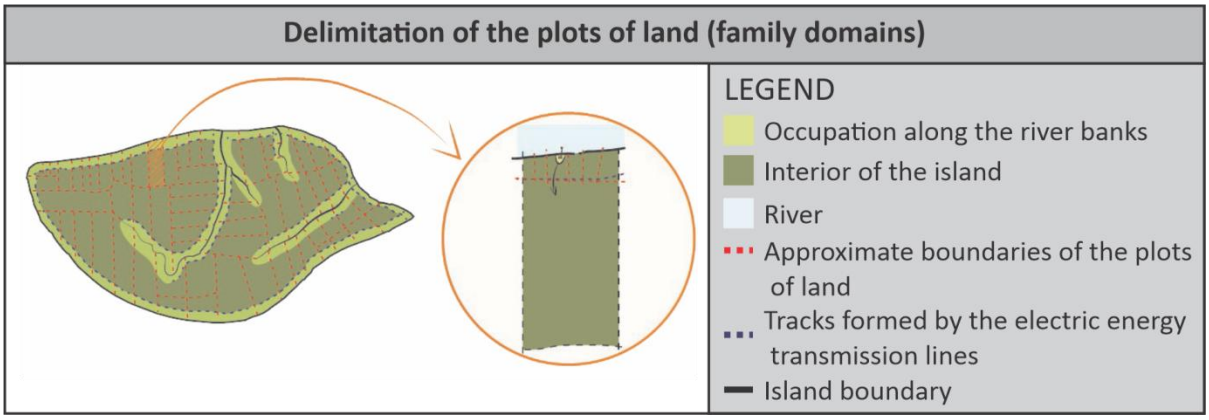
3. Characterizing the living spaces on the floodplain

Amongst the 39 islands of Belém, 17 are inhabited, and only 3 have urban parcels (Mosqueiro, Outeiro and Cotijuba). Two have been connected by bridge since the 1970s (Mosqueiro and Outeiro), and one has enjoyed public river transport provided by the city hall since the 1990s (Cotijuba). The islands with no bridge connections constitute agro-extractive settlements, and are mostly part of the national heritage (Navy-owned land), have a preserved natural environment, are inhabited by riverine and extractivist populations, with a low population density (SILVA, 2010), which contributes to the local ecological preservation and to controlling the microclimate of the metropolis (MOREIRA, 2018). Proximity to the capital enables daily commuting to the mainland, taking supplies to the street markets, accessing services or even urban work. On weekends and holidays there is an opposite flow towards the restaurants, beaches, and resorts, with emphasis on advertisements by airline and tourism companies (waterway and gastronomic tours) on Combu Island, without involving the riverine residents in these decisions, which has already caused an increase in the number of restaurants, the introduction of non-resident businessmen onto the island, an increased flow of boats and an intensification in the erosion of the river banks, amongst other processes of change.

The greenery of the islands, added to the possibility of isolation, were justification for the introduction of new typologies. A luxury gated community has been constructed inside an area of environmental interest on the island of Outeiro (Caratateua), connected by bridge to the north of the mainland, for which nature has been the main advertising appeal. All the lots were sold in one single day in 2012. The island also has hangars and marinas. Historically, Mosqueiro Island (the largest in the municipality and also connected by bridge), a weekend destination for the middle classes, has undergone major tourist developments, but tends to be treated as the periphery of Belém, where there is a coexistence of extractive communities, a Landless Workers Movement settlement and conservation units. In general terms, the larger islands contain urban areas - associated with beaches and luxury houses (weekend homes) or popular houses (for workers in the center who opt for lower-cost housing). Such diversity has resulted in new forms of environmental exploration and socio-spatial segregation in the relationship between terra firma and floodplain areas.

The floodplain life is most striking on Combu Island, consisting only of floodplain sites, and with quick access by river from the southern part of Belém, and in part of the island of Cotijuba, formed by terra firma and floodplains with river access from Icoaraci (a northern district of Belém) and an approximate travel time of 45 minutes. Both illustrate situations in which the local population has maintained traditional forms of production and reproduction, with a view to producing food for the islands themselves and for the Belém markets (VICENTE, 2019). Combu has experienced a return of its young people (who had previously left the island) in order to meet the demands of weekend tourism and of agro-extractive production (e.g.: cocoa/chocolate and açaí). However, such activities require managing large portions of land, for planting and gathering products, and in the case of Combu, for access to the river, which is used for fishing, moving around, and supplying non-drinking water (BRITO, 2019). Such a strategy depends on maintaining the traditional logic of use and occupation of the territory, with spaces for housing along the river banks and a production area in the center of the island, as shown in the diagram in Table 5. The introduction of electricity created a spatial limit that began to be used so as to highlight sections of land, which have possession (lands belonging to the State) negotiated between islanders and outsiders, where the former have surrendered access to the river, giving the river banks over to restaurants and weekend homes (BRITO, 2019).

Table 5: A diagrammatic representation of how the lands are distributed in the interior of the Island of Combu.

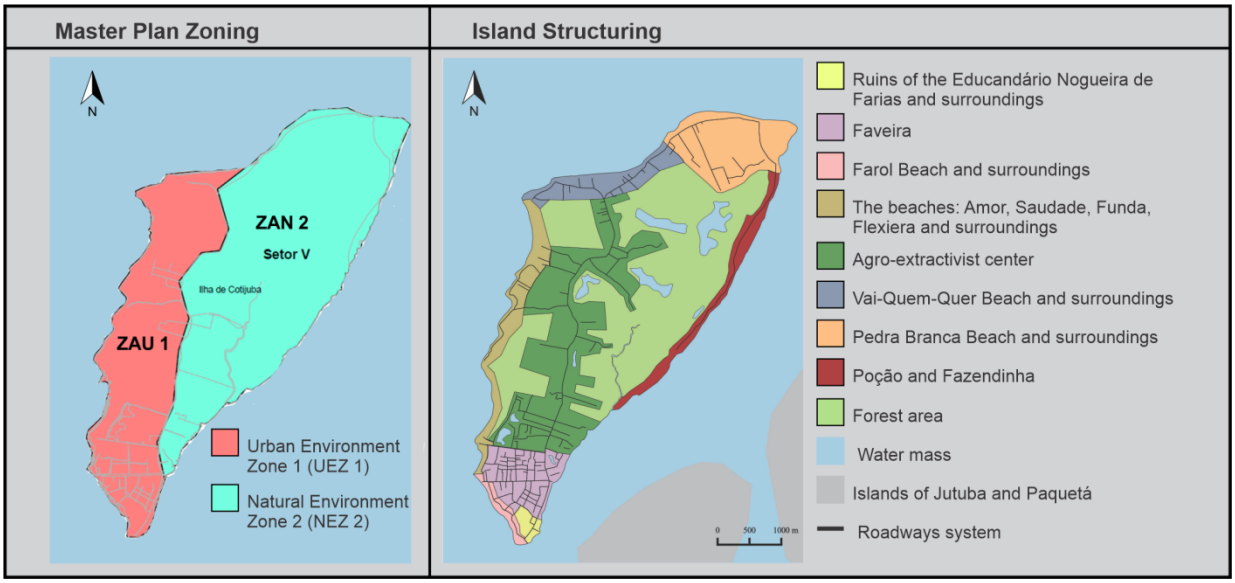


Source: Brito (2019). Produced by the authors.

In Cotijuba, it is estimated that the local population has more than doubled over the past 20 years. The number of residents and tourists has increased considerably since 2003, when the electricity transmission system was implemented. The island also has a water supply from the municipal system, although not all residents are within its reach, and is subdivided into an urbanized part and a rural part, in floodplain and terra firma territories. Cotijuba is also outstanding for its river beach landscapes, which have become a tourist attraction (VICENTE, 2019). The territorial policies proposed by the City Hall for

the island are insufficient and inadequate, since they have been constructed through instruments disseminated to the area on the mainland, and do not take into account the hybrid arrangements and the daily spatial needs of the islanders. There is a tendency to reproduce individualized urban parceling in the southern area of the island, in opposition to the mode of appropriation guided by the collective interest that prevails in the area of extractive production (OLIVEIRA, 2019). The manner in which the municipal master plan (BELÉM, 2008) regulates the urban environment has expanded the land market, favoring the conversion of rural to urban uses. Table 6 presents the official zoning of the island's territory and the sectorization scheme of the island, perceived and informed by the residents (VICENTE, 2019).

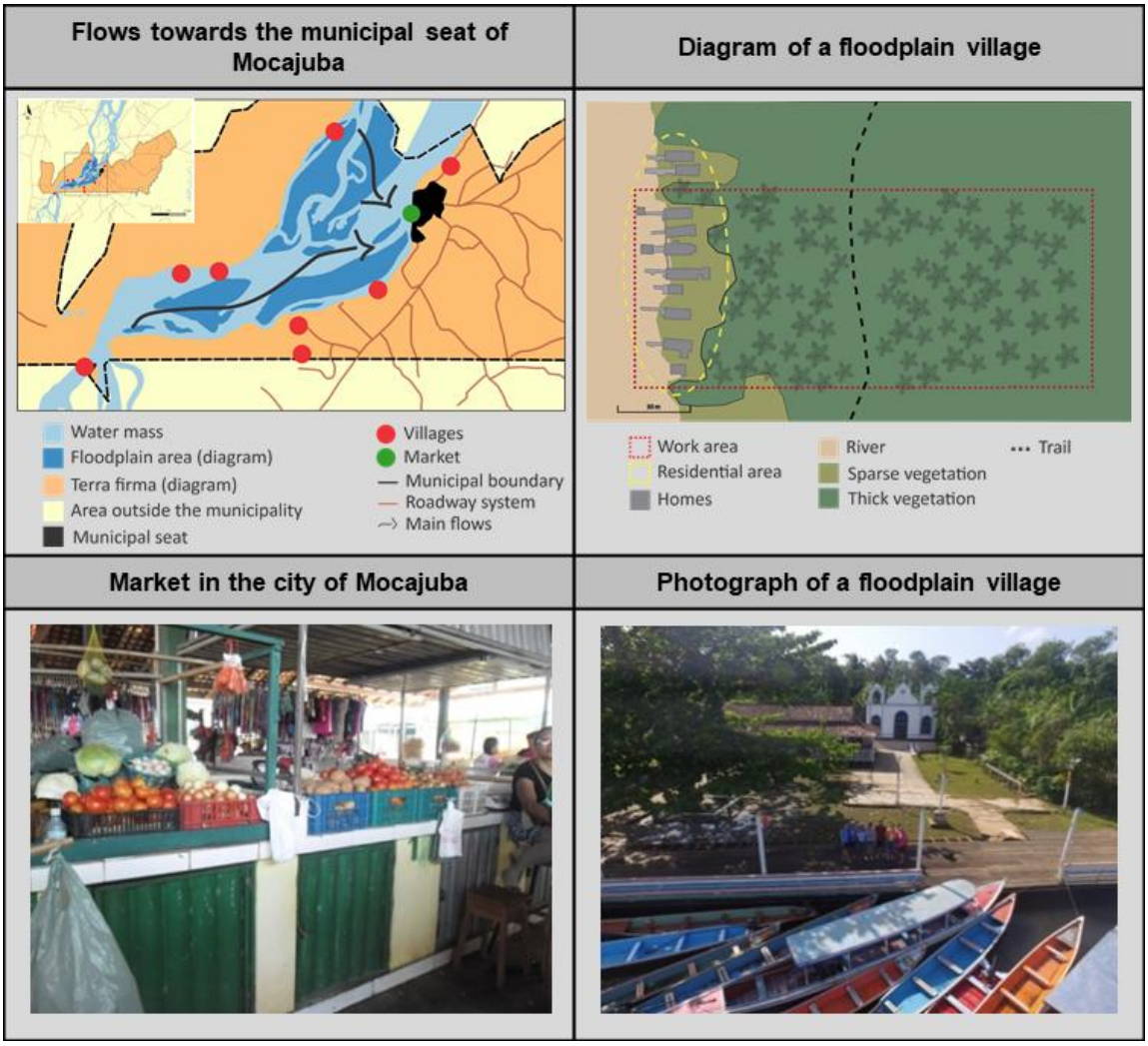
Table 6: Difference between the official zoning and the sectorization undertaken by the community of Cotijuba.



Source: Municipal Master Plan of Belém (BELÉM, 2008); Vicente (2019).

In Mocajuba, a change has taken place in the interdependence between the floodplain and the municipal seat, and no longer offers the same possibilities to the agro-extractive producers as the street markets and covered markets in Belém. In the city market it is possible to observe a greater volume of imported items than of local production, and our interviews have indicated a trend by younger generations to abandon extractive production, despite appreciating the condition of housing in the floodplain area. The search for jobs in the public sector (teacher, health worker) has increased, while the production of sweets made from local fruit is disappearing. The communities have their own identity, with a church, school and housing, located along the river banks, respecting the traditional gradient (river, housing, vegetable patch, forest). However, there are already cases of housing assistance through the *Minha Casa Minha Vida* program, in which temporary houses in the center of the community are replaced by a set of standardized houses, similar to the way in which the floodplain migrants live in houses in the same program in the municipal seat. It should be noted that the original arrangement of the floodplain had a small dwelling area, but which was linked to many other buildings (for birds, pigs, tools, engines, bathrooms, flour-making houses, workspace) and a gathering/cultivation area that may be more than 10 times the size of the community center (OLIVEIRA, 2020), but when moving to the municipal seat, the family begins to rely on just the house, and family members do not always manage to get urban jobs (see Table 7).

Table 7: Flows towards the municipal seat of Mocajuba and a diagram of the floodplain occupation.



Source: IBGE (2010); OLIVEIRA (2020). Photography by Letícia Vicente and Kamila Oliveira.

In Afuá, backyards have been reduced within the urban area, and the production previously carried out there has been transferred to the rural floodplain sites (VICENTE; CARDOSO, 2019). This process favors the introduction of concrete slabs in the city, emulating lots, and which are hotter, less flexible and threaten the existing patterns of appropriating public space, linked to neighborhood micro squares and the permanence in the wooden passageways for conversation or consumption (street vendor stalls) (BIBAS, 2018). These transformations are faster in the commercial center, where a population with a greater purchasing power is concentrated, and have the ability to change the original pattern of buildings (BIBAS, 2018). After the Charapucu State Park was created, in the rural area of the municipality, many communities were relocated and a great number of these families migrated towards the city, resulting in the creation of a new neighborhood, Capim Marinho, which carries the stigma of being a dangerous region and of having less infrastructure when compared to the Centro neighborhood (BIBAS, 2018).

In the rural floodplain of Afuá, there has been a hierarchization of centralities, which has enabled the dispersion of the population across the territory and their livelihood based on biodiversity. Such areas contain the traditional riverine villages, composed of families that share the land destined for housing and some community facilities (school, warehouse, church, wharf) and production spaces (vegetable gardens, animal husbandry, açaí management area, fruit collection area), which together with fishing and the jobs of family members in the city, make up a diversified family income arrangement. This

system is threatened by the monoculture of açaí, for the extraction of pulp, and of palmheart, as well as the deforestation due to the sawmills, thereby making wood expensive, which was once in abundance for local residents to build. The infrastructure in the villages is limited, with no electricity supply, the population depends on diesel engines or photovoltaic panels in order to use the main household appliances. Water is also collected individually, from the river or from the rain. The villages serve as an immediate support for houses scattered across the floodplain area, just as the municipal seat is the point of support for the villages, and the capital (Macapá) is the destination for more complex services (VICENTE; CARDOSO, 2019).

4. Final considerations

The floodplain environment is an environment governed by the regimes of nature, and the constant transformation (the disappearance and formation of territories) to which these areas are subjected has motivated their treatment as public lands under Brazilian law, with the exception of ancient private glebes. This signifies that the fencing inherent to private land ownership has not yet become hegemonic in this context. The tacit arrangements and spatial references of those living on the floodplains preserve the work areas of the families, giving priority to the collective interest, in rural environments, villages and islands. This historic access to production conditions (availability of primary resources - clean water, land, biodiversity) until today, has potentialized the resistance for the way of life of the Amazon peasant, guaranteeing the livelihoods of those living on the floodplains and attending the street markets in nearby cities. However, this overlap is not recognized by public policies, and the offer to improve technological conditions (provision of energy, water, transport) has occurred in order to favor the dispute over floodplain lands for new uses, based on the metropolitan experience.

Amongst the cases analyzed, a dialectical link may be observed between the countryside and the city observed in several trajectories, such as the sequence of using floodplain typologies so as to occupy the lower part of the capital, its transformation into a space of poverty and precariousness and the creation of a stigma of backwardness, resorting to landfills and macro drainage and the desire to modernize the urban floodplains of Afuá, or of the villages on Mocajuba. The multiple connections that exist between rural and urban spatial repertoires have resulted in the negation of water and soil sealing (or the construction of artificial soil - the concrete slab), as if negating the original condition of the sites was economically accessible on the periphery of capitalism.

Currently, it is already possible to understand that the way of life on the floodplain respects rivers and vegetation because this guarantees the abundance of the floodplain. There is also a need for technological solutions that maintain their virtuous arrangements and their resilience, to the extent of understanding that the urban floodplain areas may be smart limits for cities (especially the smaller ones), and should be maintained and not eliminated by urbanization, since they carry social inclusion and provide much needed environmental services in a world under intense environmental, technological, social and economic transformations as this century begins.

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