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The Tikuna ethnicity from Umariaçu indigenous territory, Alto Solimões, Brazilian Amazon: territoriality and social-environmental dynamics

A etnia Tikuna do território indígena de Umariaçu, Alto Solimões, Amazônia Brasileira: territorialidade e dinâmicas sócio-ambeintais

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ABSTRACT: The Tikuna population is settled in a wide range of land throughout the Solimões river channel in the Alto Solimões region. The Tikuna territories are marked by the organization of Tikuna individuals in association with indigenous groups. During the process of territorial conquest, in the 80's and 90's, the indigenous territories were divided into different communities. This fragmentation led to the formation of territories of different sizes and environmental conditions, either close or far away from the cities of the Alto Solimões region. Social-environmental configurations have reduced the indigenous territories; transformations are related to the Solimões river's natural modifications and to anthropic modifications such as the Tabatinga International Airport. This study aims to demonstrate the Tikuna territories in Umariaçu and the socio-environmental dynamics that have been reducing their spaces and natural resources. The study emphasizes the environmental and social disturbances in an indigenous territory close to Tabatinga municipality.

KEY WORDS: Tikuna ethnicity, Alto Solimões, Brazilian Amazon, social-environment conflict.

RESUMO: A população de Tikuna está instalada em uma ampla faixa de terras ao longo do canal do Rio Solimões, na região do Alto Solimões. Os territórios dos Tikuna são marcados pela organização de indivíduos Tikuna em associação com grupos indígenas. Durante o processo de conquista territorial, nos anos 80 e 90, os territórios indígenas foram divididos em diferentes comunidades. Essa fragmentação levou à formação de territórios de diferentes tamanhos e condições ambientais, próximos ou distantes das cidades da região do Alto Solimões. As

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configurações socioambientais reduziram os territórios indígenas; as transformações estão relacionadas às modificações naturais do rio Solimões e a modificações antrópicas, como o Aeroporto Internacional de Tabatinga. Este estudo tem como objetivo demonstrar que os territórios dos Tikuna em Umariaçu e as dinâmicas socioambientais reduziram seus espaços e recursos naturais. O estudo enfatiza os distúrbios ambientais e sociais em um território indígena próximo ao município de Tabatinga.

PALAVRAS CHAVE: Etnia Tikuna, Alto Solimões, Amazônia Brasileira, conflitos socioambientais.

INTRODUCTION

The Tikuna population is distributed over three countries, Brazil, Peru, and Bolivia, in a triple-border region called "Tríplice Fronteira do Alto Solimões", in the Amazon (Figure 1a) (see MEDEIROS AND FREITAS, 2015). Currently, the Tikuna territories are subdivided into communities, known as Indigenous Villages (SOARES, 2014). In Brazil, the Tikuna people is distributed along 22 indigenous territories, comprising 116 communities (SOARES, 2014). This distribution was mainly set throughout the Solimões river and their social-environmental dynamics are different depending on the community and on its proximity to cities that comprise the Alto Solimões mesoregion, in southwestern Amazon (ERTHAL, 2001).

According to the Territorial Plan for Sustainable Rural Development (PTDRS), the municipalities comprising the Alto Solimões mesoregion are divided into structural subregions. The first subregion, Alto Solimões Region, is comprised of Amaturá, Atalaia do Norte, Benjamin Constant, Santo Antônio do Içá, São Paulo de Olivença, Tabatinga, and Tonantins municipalities. The second subregion is comprised of Fonte Boa and Jutaí municipalities. All nine municipalities are part of a 150-km wide region called "Faixa de Fronteira" ("Border Line") parallel to the dividing terrestrial line of the Brazilian National Territory, in the Solimões river channel (CANTO, 2011).

The Tikuna ethnicity is the largest in Brazil, with approximately 50,000 inhabitants distributed in fixed territories along the Solimões river (ERTHAL, 2001). The Alto Solimões mesoregion has several Tikuna indigenous territories. The Tikuna diaspora led to a territorial fragmentation and different social dynamics along the Solimões river channel (ERTHAL, 2001). This migration process created indigenous territories of varied sizes, population contingents, and natural resources with peculiarities that currently do not meet the social-environmental and economic needs of the Tikuna people (ERTHAL, 2001).

To establish a standardization of the term territory to describe the Tikuna population, we used the definition created by Medeiros (2008). The author describes territory as a space portion set on the same cultural identity and sharing the same feelings. In this sense, the author emphasizes the boarder that defines the territory, delimiting the force space. Therefore, territory is the

protected, negotiated, desired, lost, and dreamed space, which the symbolic and effective strength is strong (see MEDEIROS AND FREITAS, 2015).

Noda et al. (2013), described the landscape creation process as a result of an unstable and dynamic combination of physical, biological, and anthropogenic elements connected to a cultural influence set on a certain space. Therefore, the landscape is a subjective space, which is felt and experienced (see FAULHABER, 2004; MEDEIROS AND FREITAS, 2015).

Therefore, during the creation of their territory by the Brazilian government, the Tikuna people felt and experienced their spaces being negotiated and reduced to proportions that do not guarantee the survival of their increasing population. The reduction of natural resources caused by the clandestine entrance of different social actors in the indigenous territories, facilitated by the Tabatinga International Airport, have also altered the Tikuna spaces (see SILVA, 2008; ALBUQUERQUE AND PAIVA, 2015).

Our study brings an example of such changes in the indigenous territory, the social-environmental dynamics of the Umariaçu Indigenous Territory is evaluated. During the formation of its territory, the Umariaçu people suffered interventions related to the growth of Tabatinga and to the influence of several social actors (lumbermen, militaries, farmers, missionaries, other indigenous ethnicities, researchers, among others). In this context, the growth of Tabatinga directly influenced significant transformations in the landscape of Umariaçu which was turned into an environmental transformed and permanent space.

This study was set in a space between the indigenous territory of Umariaçu and Tabatinga municipality (Figure 1b). This territory was transformed to meet the need for expansion of Tabatinga rather than the requirements for the survival activities of the Tikuna population.

Noda et al. (2013), consider the Alto Solimões as a strategic region among the Brazilian, Peruvian, and Colombian Amazons. The authors stated about the federal public policies that over 15 years have been altering de distribution of the population of the Alto Solimões region and the production strategies, which consequently have changed the landscape and the biodiversity. Considering the environmental exploitation that have been taking over the Tikuna territories, this approach can also be applied to these indigenous communities; such exploration compromise the social reproduction and identity of the Tikuna people.

The space delimitation shown in Figure 1b, occupied by the two societies, demonstrates that over time the social relations led to new configurations of the territory that directly affected the environmental and economic features of the Tikuna from Umariaçu. Therefore, the study performed a survey of the evident social-environmental dynamics of the Tikuna territory. This

dynamic imposes important conflicts to the ones responsible in putting into action the Tikuna traditional knowledges as a way to keep the elements responsible for their ethnical identity.

Coming for a hunter-gatherer past, the Umariaçu Tikuna had their territoriality redrawn into standards stablished by the State, which delimited the borders between the Umariaçu indigenous territory and Tabatinga. This delimitation process created a dependence for goods and services coming from the city; and the non-sustainable exploration of natural resources led to an environmental instability in the Tikuna territories. This study defined the social-environmental fluctuations that occurred in that space between the indigenous territory and Tabatinga based on some historical events. The construction of the Tabatinga airport runaway is considered one of the events that brought a huge backward step for the Umariaçu Tikuna population.

MATERIALS AND METHODS

This research was based on interdisciplinary principles as methods to comprehend and reestablish the relationship between society and nature. According to Leff (2000), "the interdisciplinarity has been defined as a strategy that searches for the joining of different subjects to address a common problem". Therefore, during the survey, a connection was made between the environmental history and other knowledge fields.

The methodological procedure was divided into two stages. **First stage**: exploratory research performed with two groups: (1) representatives of the Tikuna indigenous ethnicity; and (2) representatives of the civil society. The exploratory research was performed to gather previous data on the limitations and possibilities of the investigation about de social-environmental dynamics of in the Umariaçu territory. After this previous stage, the itinerary for the oral testimonies could be set. **Second stage**: field work — orality, memories, and histories: the oral testimonies were performed with groups chosen during the first stage of the research. The aim of this stage was to get information, versions, and impressions concerning the main transformations that occurred in the Umariaçu indigenous territory to describe the social-environmental transformations.

The testimonies were collected through the Oral History procedure. According to Freitas (2002), this procedure is a methodology based on interviews and other data collection to record human experience narratives. The Oral History method records reminiscences and reinterpretations of past situations that can act as an alternative to the official history.

The results obtained by the Oral History must be interpreted during meetings between narrator and researcher. According to Dermartini (1992), the data collection based on interviews allow "the standardize of the reports, but to see the richness of each narrative — richness that is

not evident in the speech but in the narrative of an unknown fact and in the description of an everyday situation".

The theme selected to guide the oral testimonies was: territoriality and the social-environmental dynamics in the Umariaçu indigenous territory inside the borders established by the demarcation process and the construction of the International Tabatinga Airport runaway. The contact with the population began in 2016 and was approved by the Ethical Committee (CAAE 65019316.0.0000.5182).

RESULTS AND DISCUSSION

The borders built throughout the historical process of the indigenous territory formation imposed new configurations on the ethnical identity of the Tikuna people. Concerning this new configuration, Little (2002) defines territoriality as the "collective effort of a social group to occupy, use, control, and identify itself with a specific portion of the physical environment, transforming it in territory" (see also TEIXEIRA et al., 2016).

To establish the elements required to build a territory, the Tikuna people experienced different social situations throughout its existence and migration to the Alto Solimões region. These different social conditions led to the communities settlement along the Solimões river. The characteristic way that the Tikuna people delimits a territory is connected to the natural and material symbolism to establish a protected family space to build plantation fields and houses for the future generations.

To analyses the socio-environmental dynamics in the indigenous land, the definitions about the use of natural resources and family territory formation were presented as strategies to discuss what Leff (2001) defined the social assessment to the nature "as the cultural traditions which establish the land tenure, property, and uses of natural resources. The author also established the gender and age relationships, work division, and distribution of productive activities during the family territory formation. All these social conditions and cultural rationalities dictate the use pattern of natural resources.

> Social assessment to the nature as a land tenure process: the birth of a Tikuna descendant is an event that marks a territory as the place for the future family constitution. At birth, the baby's belly button is buried in the birth place that will be its property during family formation, house building; a dreamed and protected space for the future generations.
>
> Property and use of natural resources: in the Tikuna community, the property is a collective good, there is no physical separations of the

> territory. Each family has its space mentally delimited by the land use. Each cropping field and planted tree are family goods. No one enters each other's property to collect fruits without previous permission. The property is a protected space within the family hierarchy.
>
> Gender and age relationships, work division, and distribution of productive activities: currently, the work division among the Tikuna has new configurations which are gradually learned by children and young focused on school tasks. The school education has great achievements, the teachers are also Tikuna members; this situation has been contributing to the instruction about their ethnical identity, mainly the mother language. In the past, children and young, along with their parents, were active in the family field productive activities. Nowadays, these young members are actively engaged in school activities turned to the dissemination of ethnical knowledge and professional education linked to transformations of the indigenous territories. The indigenous territory is a desired and dreamed space essential for the durability of the Tikuna people's ethnical identity.

Therefore, the social-environmental dynamics of the Tikuna people are stablished by internal rules that determine the family territory and the collective use of natural resources. Noda et al. (2013), described that the common property has access limited to a specific group which has rights and responsibilities, rather than a free-access property. In addition to these features, the Tikuna property includes the cropping fields and trees planted by the family; each family knows its respective space for economic activities.

Concerning the Umariaçu territoriality, these elements should have been considered during the establishment of the Tikuna indigenous territory. Those features are symbols, values, and rules that guide the individual, familiar, and collective experience of the Tikuna people. During the territorial delimitation of the indigenous territories of Umariaçu I and II imposed by the State, the elements were underestimated which led to negative social-environmental dynamics to the population.

Always considering the territory definition as the occupied and experienced space, the transformations which marked the social-environmental dynamics of the area started with the construction of the Tabatinga airport. The area supposedly belonged to the State, which would allow, in the 60's, the construction of an infrastructure designed to the Tabatinga population's needs.

Here, we highlight that by the time of the construction, the airport area was used by the Tikuna (MEDEIROS AND FREITAS, 2015). With the construction, the indigenous territory was

separated in two, leading to negative social, environmental, and economical dynamics for the Umariaçu Tikuna people. The Figure 1c shows the transformations caused by the airport runway: (I) reduction of areas to the establishment of cropping fields; (II) reduction of natural resources caused by tree cutting for the runway construction; (III) increase of the distance between the two indigenous territories which became separated by wall and fences to prevent populational movement.

The trees cut during the airport construction used to provide nutrients to the soil which helped the cropping fields productiveness (Figure 1c). The agricultural production areas in the Amazon Forest are complex systems with different landscapes in an environment that can be explored by traditional groups. The construction of the Tabatinga International Airport occupied an area of crucial importance to the Tikuna people. The areas outside the airport limits are rich in "chavascal" (flooded-soil areas non-suitable for cropping fields) (Figure 1d); examples will be presented using Noda et al. (2013) concepts.

Other difficulty caused by the airport construction was the distance that the Tikuna people had to walk through the INFRAERO delimitation area to reach the other side of its territory, as explained by interviewee 2: "to reach the territory on the other side of the runaway, someone walks more than 20 kilometers carrying cassava, hoes, and barefoot children. Most families bring everyone to the cropping activities and seasonal fruit, Amazon grape, and buriti harvesting; that's the tradition. It is inhuman to walk this distance in such a hot weather."

Evaluating this speech, it is evident the frustrations experienced by the Tikuna nowadays. These frustrations are results of a previous construction which currently threatens the economic survival and well-being of the Umariaçu indigenous territory residents. As shown in Figure 1d, the distance between the two territories is extensive and hampers the extractive and cropping activities of the local population. As an alternative, INFRAERO built four gates along the runaway which decreased the walking trajectory between both sides. In Figure 4a, the gray lines represent the gates area.

However, the use of the gates is impracticable; they lead to an air traffic area, contradicting all life safety rules for both residents and flight crew and passengers. Despite the dangerous situation, the gates became an alternative to the Tikuna and their use should be reevaluated to preserve residents and animal's safety. These social-environmental dynamics directly influence the production activity of the Tikuna. Therefore, the construction of the airport still is a concern in the present days.

Currently, new negotiations are underway between the INFRAERO and the Tikuna about the possibility of the increase of the airport runway. The indigenous population are against this

increase which would invade even more their territory and reduce the "chavascal" and stream[4] areas that irrigate the water courses.

Currently in Brazil, the indigenous population are being increasingly pressured by the reductionist policies of their territories. The natives are on alert for the government proposals concerning exploration policies to improve the economic development of the country (NOGUEIRA et al., 2017). Such exploratory policies threaten the legal support so far achieved for the creation of the Alto Solimões Indigenous Territories and to the Amazon forest protection, that harbors the largest ethnical and biological diversity. Constantly political discussions set by the government in 2017 have been threatening the indigenous population in Brazil. Such discussions include the abrogation of ecological reserves to allow mineral exploitation which would create unprecedented crises in the cultural security and ethnical identity of the Amazon forest population.

Therefore, there is a new future scenery expected for the traditional and general population of the region. During the history of their territorial formation, these populations suffered increasingly exploitation by different social actors and are currently going through changes that bring more environmental damage (ALBUQUERQUE AND PAIVA, 2015; MEDEIROS AND FREITAS, 2015; NOGUEIRA et al., 2017). These changes include the mining activity, that contributes to the forest felling and reduction of the biodiversity, and from which the Amazon people only make profit from the residues. Large companies profit from financial investments all over the world, except from the Amazon of social poverty (e.g. PwC, 2013).

Although it is guaranteed by law (BRAZIL, 2015a, 201b), the territorial delimitation processes did not prevent the Umariaçu tndigenous territory from being invaded and exploited inside their limits. The institutions that should guarantee the guardianship of the indigenous territory are the ones that impair the conservation of these populations. The challenge is to live in a limited territory with scarce natural resources which do not meet the basic needs of a growing population, as the one evaluated in this study.

For the Tikuna people, the symbolic bonds permeate the limits and borders established by the government territorial delimitation based on physical marks or barriers (MEDEIROS AND FREITAS, 2015). In this context, the connection with the land are identity elements for the Tikuna people. A tree, a child's belly button, or a cropping field are indicative that the land already has an owner. Each family will have a piece of land to grow a crop and plant trees. The trees products are for family use, no one can take bananas, açaí and abiu fruits, pupunha palm, Amazon grape, buriti, or medicinal herbs from a Tikuna's land. The land is clean, the women are constantly removing the grass from the crop with the aid of a hoe. The houses are made of wood and mansory.

[4] The term stream herein is used to define the Brazilian term 'Igarapé'.

The social habits in an indigenous territory reproduce in the present values learned in the past, reaffirming that the Tikuna can live between tradition and modernity amongst all contemporary conflicts. Interviewee 1 explains this situation. "When a child is born, its belly button is buried at the place which that child will live and start a family". Another mechanism of territorial delimitation is the establishment of areas to grow a crop. "When a Tikuna plants a tree, the right to collect its fruits belongs only to the family; there is a respect concerning each other's spaces".

Following the concept of the family use of territory to produce and build places for the physical reproduction of the Tikina's identity, a growing concern threatens the survival of the Tikuna in the future. Is it possible to live in a territory reduced by so many social-environmental dynamics? Is it possible to keep alive the Tikuna identity facing the reduction of the cropping area? Is it possible to perpetuate life on a land that no longer support cropping? The interviewee 2 describes this situation: "It is very rare for a Tikuna to have less than 10 children; he has 15 (another Tikuna individual present in the conversation), me and my wife have 7 children"[5].

All these questions demonstrate the current situation in most Brazilian indigenous territories. As it was previously mentioned, the changes in the indigenous territory caused by the airport construction reduced the areas available for cropping and fruit collections.

However, there is an environmental factor influencing this territorial reduction; the Solimões river is an actor of the social modification of floodplain and dryland areas in the Alto Solimões region.

The Amazon lands can be categorized in to environments: floodplain and dryland areas (Figure 2a, b). The dryland soil has almost no nutrient and its constant use impair the crop production, which requires a resting period on the land use and crop and plantation area rotation. The floodplain areas are suitable for summer crop production during the dry season. The soil has nutrient abundance resultant from the mineral deposition, which occurs during the annual flood season of the Solimões river.

Noda et al. (2013) characterizes the floodplain environment:

> It is a complex system of different landscapes in which their natural resources are used in different exploitation activities: sandbanks areas with permanent agricultural vegetation (farms); natural sandbanks; lowlands and beaches with temporary agricultural vegetation (crops and plantations of annual species); secondary vegetation mainly comprised of ligneous species and grass; waterlogged areas; forests, lakes, rivers and streams. The forest and aquatic environments are explored by floodplain farmers during

[5] Interviewee. Representative of the Tikuna Indigenous Ethnicity.

> vegetal extractivism and artisanal fishing activities. Fish is the most important and primary protein source for the riverside communities.

An important complain of the Tikuna people concerns the reduced space available for the development of economic and social activities (e.g. OLIVEIRA, 2000; SANTOS et al., 2014). The resident population lives in a space built with several restrictions to fit the dynamic balance between the population growth and the gradual territory reduction caused by environmental and anthropic factors. The diverse features of distinct areas of the Amazon Forest favor different production routes in the environmental systems. In the case of the Umariçu indigenous territory, the territorial constrains impair a balance among environmental, economic, and social factors.

In the Umariaçu indigenous territory, there is a predominance of dryland areas with large portions of "chavascal" (Figure 2a) unsuitable to cropping activities. This impossibility is related to the poorly drained soil which is mainly used for the buriti, Brazilian nuts, açaí, Amazon grape, and abiu fruit extractivism (NODA et al., 2013).

The third interviewed[6] made description of the Tikuna territory: "we have approximately 548 hectares of land. An enormous portion is comprised of waterlogged "chavascal" …so we can't live on it or plant on it. The community is destroying the "chavascal". They are cutting down the buriti tress to cultivate Turu larvae[7]. The larvae are sold in Letícia city, in Colombia, where they are very popular…" The interviewee is then asked if the area is suitable for cropping: "no, because it is completely soaked."

It is obvious from the interviewee speech that the Tikuna members view the territory as a place to establish their economic activities. According to Noda et al. (2013), the ecosystem complexity of the Amazon forest imposes adverse cultural patterns. Considering the Umariaçu communities I and II, their territories are comprised of spaces non-suitable for cropping. There is a wide portion of waterlogged "chavascal" along the whole territory extension. Another social-environmental problem is the extraction of the Turu larvae to sell in Letícia, Colombia.

This situation is problematic to the Tikuna population from Umariaçu. To extract the Turu larvae, buriti tress must be cut down, leading to a reduction of "chavascal" areas and a consequent soil impoverishment (e.g. SAINT-PAUL, 2006; Merten and Minella, 2013; RODRIGUES et al., 2013). The Amazon floodplain areas have several buriti plantations; the constant loss of these trees may bring future environmental problems to the indigenous community. The current plan amongst the native community is to stop the Turu commercialization and preserve the "chavascal" areas.

[6] Representative of the Tikuna Indigenous Ethnicity.
[7] Bivalve mollusc of the genus *Teredo*, typical of mangroves from northern Amazon Forest. In Brazil, it is also known as sea-termite. This animal can be eaten and is typical of Amazon cuisine.

These areas are also being impacted by landslides from the Solimões river banks ("Terra Caída" — Fallen Land — phenomenon), as the third interviewed describes. "The floodplain, well…This area is finished, the "chavascal" is fallen…People are being affected by the fallen land…"

Interviewee 4[8]: "What we have now in the floodplain I compare to a bull. The bull would be our territory, its tongue is the floodplain; that is, there's little floodplain area to the summer crop and all space is occupied by the ancient Tikuna."

The territorial delimitation in Umariaçu have been constantly affected by transformations caused by environmental actors (LAURENCE AND PERES, 2006). The constant landslides near the community made the floodplain areas disappear, areas which are crucial for summer cropping. This constant reduction has affected the "chavascal" areas. At each year, there is a displacement of the residences from the proximities of the Solimões river banks to the most inner areas of the indigenous territory.

However, it is important to highlight that the floodplain areas are not so abundant in the Amazon region in comparison with dryland areas. The first interviewed 1 speaks about the situation in Umariaçu: "in our territory, there is only a small piece of floodplain which is divided among the ancient Tikuna and is passed along generations". That impression was also shared by the fourth interviewee. During the summer, the low-water level of the Solimões river exposes the floodplain areas which become full of cassava, watermelon, bean, corn, banana, and other vegetables. During the bountiful harvest, the Tikuna sell the cultivated products and buy what is messing for the family supply. Coffee, sugar, milk, and other products are sold in small grocery stores in the indigenous community or in Tabatinga.

Noda et al. (2013), writes about the use of floodplain areas in the agriculture in the Alto Solimões region:

> There are two main reasons why it is not possible to permanently establish physical limits in floodplain areas used in farming activities. The first is the constant construction and destruction processes occurring in terrestrial environments. The second is the unstable limits between terrestrial and aquatic surfaces caused by the periodic and irregular floods and drainages. The legitimation process for the individual appropriation of these changeable terrestrial spaces, such as the Amazon floodplain, is at some extent social, and corresponds to a cultural nexus.

Concerning the agriculture use of floodplain areas by different kinds of non-traditional farmers, Noda et al. (2013) made some observations. For the indians, the use of floodplain areas

[8] Interviewee 4. Representative of the Tikuna Indigenous Ethnicity.

goes beyond the juridical legitimation processes of land tenure of a changeable environment. In indigenous territories, the connection that kind of land are related to the territorial occupation previously defined.

The river basins are other important modifier actor of the Amazon Forest territories. Here, we will only consider the Solimões river; a river of clean and troubled waters, or as the Tikuna people use to say, in constant "banzeiro"[9]. The Solimões is a young river still in formation process, its riverbed is not yet fully established. Therefore, at each year, the Solimões has a different riverbed configuration which leads to an expansion of the river, pressuring the dryland areas. In high drylands, the Solimões river induces the fallen land phenomenon which annually reduces the dryland areas of the Umariaçu indigenous territory and other Amazon territories (Figure 2d).

This feature is crucial to understand the environmental pressures to indigenous areas caused by non-human actors. So, aside from the environmental pressures (DIRZO AND RAVEN, 2003; LAURENCE AND PERES, 2006), the Umariaçu Tikuna are affected by social dynamics related to the economic growth policies through the history of Tabatinga. Without a policy to guarantee the survival of the Tikuna, the population grows with a constant challenge of adapting to the consequences of past political decisions (OLIVEIRA, 2000).

It is important to mention that during the territoriality process, the Tikuna could experience ethnical reproductions that are not being experienced nowadays. A Tikuna family expresses itself through its members, respecting the bonds established in mythological times, the patriarchal social organization, the work focused on the construction of cropping landscapes and vegetal extractivism.

According to Galoois (2014), the territoriality is an approach that recovers and appreciates the occupation history of a land by an indigenous group. Besides, it provides a better comprehension of cultural elements present during the indigenous territorial occupation and management. Therefore, for the Tikuna people, territoriality is a memorial bond between their past and present territories, which is currently occupied by the Tabatinha International Arport.

According to the Tikuna people, the social-environmental dynamics of their living areas generate conflicts between their territory and Tabatinga (e.g. ALBUQUERQUE AND PAIVA, 2015). Through time, the projects developed for the city growth have been impairing the lives of the Umariaçu Tikuna. Therefore, we finish with the Tikuna's conclusion about the contemporary dynamics in the Umariaçu indigenous territory:

[9] Term from northern Brazil. It means turbulent water or succession of waves caused by a moving ship.

> "There is no land available for cropping activities. The water from the igarapés are polluted, our children and grandchildren have skin diseases, the climate changes have been turning the days even hotter. Nothing has been done for the Tikuna people because we are right next to the city, and even the FUNAI[10] appreciates only other ethnicities, we have been forgotten. Our territory is sick because everything that nature gave us before is not being given anymore"[11]

FINAL REMARKS

The territoriality of the Tikuna population is an achievement based on the Tikuna's fight to guarantee their lands throughout the Brazilian political history of territory delimitations (BRAZIL, 2015a, 2015b). However, currently the delimited territories suffer constant environmental and anthropic transformations that affect the ethnical identity of the Tikuna from Umariaçu. This delimitation has not been helpful during the Tikuna's journey to fight for their defended, dreamed, lost, desired, and negotiated space. This journey is impaired by the current advances of a policy focused on the economic growth and by the constant biodiversity reduction. The biodiversity is a crucial condition for the fertility of the Amazon lands and survival of traditional populations such as the Tikuna (MMA, 2007; SOBREVILA, 2008; STEPHENS AND ATHIS, 2015; WALDRON et al., 2017).

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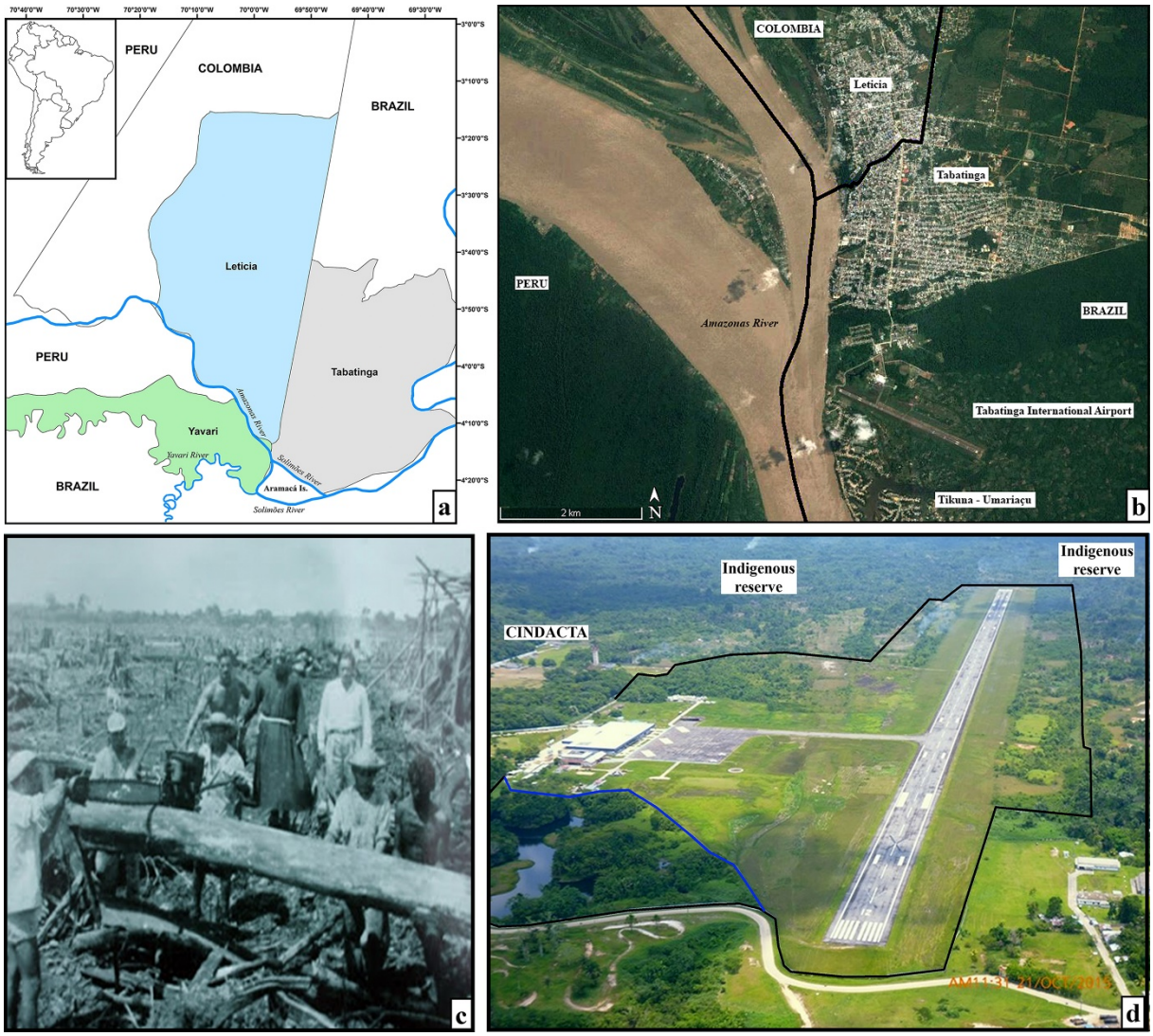

Figure 1. a, Borders of Tabatinga (Brasil), Leticia (Colombia) and Yavari (Peru), with recogniziton of the Amazonas and Solimões Rivers; b, Satelite map showing the study area, black line indicating the administrative boarders; c Historical photograph illustrating the opening process to the construction of the airport runway; d Tabatinga International Airport, black line showing the airport limits, blue line demonstrating the operational fence. Source of the figure 1c: Archives of the Armed Forces, Taabatinga, 2016.

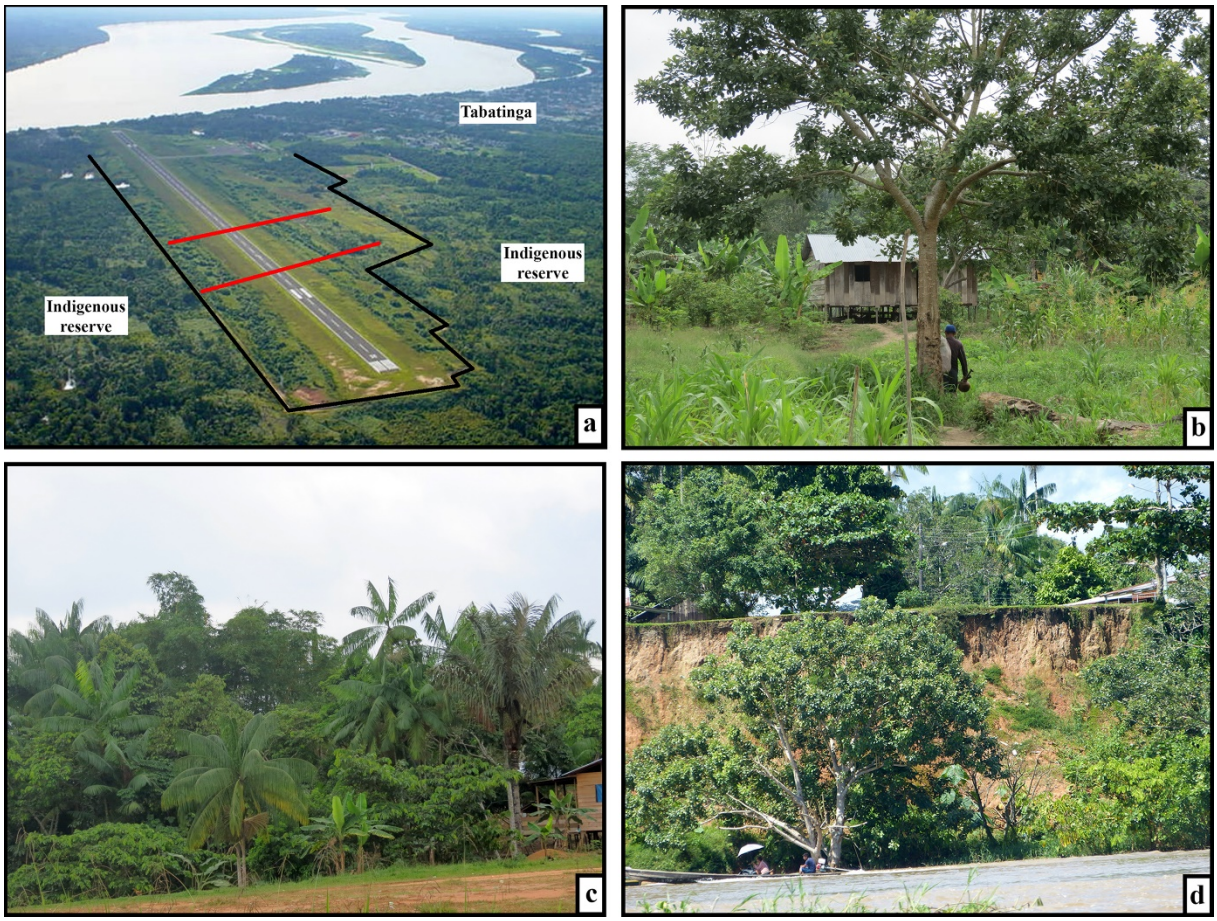

Figure 2. a, Tabatinga International airport, red lines showing the pathway used by Tikuna people of Umariaçu to cross the airport; b, Stream area (várzea); c, Mainland area; d, Falling land phenomenon in front of the indigenous reserve of Umariaçu.