



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
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LAND GOVERNANCE, LAND POLICY AND INDIGENOUS PEOPLE LAND USE AND ACCESS RIGHTS IN THE BRAZILIAN AMAZON AND MATOPIBA AFTER THE CONSTITUTION OF 1988.

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Abstract

Internationally there are an alarming number of violations of indigenous peoples' land and human rights. Brazil is currently under the spotlight as the heightening of the political crisis that led to the impeachment of Dilma Rousseff brings national and international concerns over the uncertainty related to changes in policy that may be adopted by the interim Government in relation to indigenous peoples land rights. With a focus on land governance, our study aims to assess if the policies for indigenous land in the Legal Amazon and Matopiba since the Constitution of 1988 represented an improvement or regress to the indigenous population's land use and access rights. We structured this study in the following way: 1) Background on Brazilian weak land governance and its relation with indigenous land rights, 2) Indigenous territories' laws and improvements after 1988, 3) Sources of pressure on indigenous territories – Agribusiness, 4) Sources of pressure on indigenous territories – Large-scale infrastructure projects, 5) Discussion and policy proposals.

Key Words: Land governance; Indigenous land; Brazil; Amazon; Land rights; Land policy.



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1. Introduction

Concerns over the rights of native people are growing all around the world and central to it are their rights to land. Many countries have been struggling with this issue while Brazil, already in the 1980's, created important solutions that have interesting results. This is the main aim of this article, to discuss the Brazilian solution and analyze its impacts and shortcomings. The study starts giving a general context to the problems that are mostly derivate from the lack of land governance and the development process based on occupying new areas, mostly in conflict with indigenous people. Next the article analyses the Indigenous territories' laws and improvements after 1988 and covers the country's experience of creating more than 560 protected indigenous areas, which sums up more than 140 million of ha. The second item shows some social improvements that these indigenous populations obtained recently, mostly related to this policy. The third and fourth items discuss the main sources of pressure on indigenous territories the expansion of the: Agribusiness expansion and Large-scale infrastructure projects. The last item discusses the risks that are in the political horizon that can potentially revert the improvements earned by the indigenous people and the article concludes with a set of policy proposals improving land governance focused on strengthening indigenous land rights in Brazil.

1.1. Weak land governance in Brazil

The history of the Brazilian development is characterized by the occupation of land, mostly from the indigenous populations. So, these populations were decimated in large quantities until the half of last century. That is the main reason for the legal and institutional mechanisms developed until the 21st century to deal with the land in Brazil. Formal regulations, which have never been completely enforced, make land access in Brazil both fragile and inchoate (Reydon et al, 2015:510).

A huge body of Constitutional law, land law, civil property law, environmental law and planning law, operating at national, state and local levels, governs land relations and land institutions in Brazil. A large set of agencies are involved in the



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



establishment and regularization of land rights, their recording and documentation, processes for establishing allowable uses, managing special use areas, planning overall land use, and conflict resolution. This body of law and these institutions embody a number of characteristics that have created wide gaps between the reality of land relations on the ground and the legally mandated requirements for landholdings and landholders. This confusing institutional framework creates gaps that contribute to some of Brazil's most pressing social, economic and environmental problems and surely was the main reason for the problems that indigenous people faced.

The absence of mechanisms that regulate the ownership, use and occupation of rural and urban land is one of country's major land problems more so to the indigenous people, which were always expelled from their land. And this lack of regulation, effective rather than rules, results from and is determined by the possibilities to speculate on land, that is, to make money with the purchase, maintenance, transformation and subsequent resale of land in any of its form.

It is also known that the rules that were aimed at the effective regulation of these markets through laws always ended up being circumvented or not enforced, creating more favorable conditions to speculation for some people. Therefore, the ideal regulation would be the one in which society had governance and could define the proper use of the land, either from the production point of view or for homes, simultaneously preserving the environment.

This lack of land governance can also be found systematically in the results of the four stages of the Land Governance Assessment Framework (LGAF) applied to Brazil in the last years, showing that:

- Lack of control over public lands;
- Private land property registry is not reliable;
- The registry coverage is incomplete and not up to date;
- Lack of spatial information (georeferencing) on the registry of private land properties;
- Lack of a reliable and integrated registry of public and private land;
- Low level of land property taxation;
- Supply, land use planning and regularization of urban land are not in line with the demand;
- Neglectful governance over large scale land and forest acquisitions



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



So, this combination was the main reason for the large problems that the indigenous people were facing. During the 1960 and seventies, the indigenous people started to organize themselves as can be seen in next item.

1.2. Socioenvironmental context and the indigenous leaders' past struggle

The indigenous people organization process gained strength during the 1960's and 1970's backed by FUNAI (government agency for the indigenous people), CIMI (a catholic church branch focused in protecting the indigenous people in Brazil) and NGOs. CIMI was fundamental in articulating the many indigenous groups during this period, especially during the 15 Indigenous Chiefs Meetings (Assembléias de Chefes Indígenas) that took place in the 1970's and 1980's. This paved ground to the inclusion and strengthening of indigenous rights in the Constitution draft – although not without intense political struggle from the indigenous people, its leaders and the organizations for indigenous rights (Evangelista, 2004). Another actor that played an important role was the UNI (Indigenous Nations Union). It was an organization created to represent the many indigenous ethnicities and had as president and vice-president Ailton Krenak and Álvaro Tukano, both of whom participated actively in the elaboration of the Constitution. These facts paved way for the participation of the indigenous people on the elaboration of the Constitution for the first time in the country's history (Lopes, 2014).

1.3. The Constitution of 1988 as a milestone to indigenous population

The main international legislation that protects the indigenous rights is the the International Organization of Labor (ILO) Convention n° 169, from September 1991 on tribal peoples indigenous and can be considered an instrument of social inclusion of the indigenous peoples. But it only was ratified by Brazil in 2002, through the Legislative Decree 143, and promulgated by the presidential Decree 5,051 of 19.04.2004, and can only be revised with the approval of the National Congress.

The document recognizes the aspirations of the indigenous peoples in assuming the control of its proper institutions and forms of life and its economic development, and keeping and to fortify its identities, languages and religions inside of the scope of the States where they live. It is understood that the protection to the



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



rights and culture of the indigenous peoples contributes for the cultural diversity, social and ecological harmony of the humanity (Convention n° 169 OIT, 1991).

The Brazilian Constitution of 1988, that consolidated the democratization process that started in 1985, consolidated these rights, when established the cultural diversity as a Brazilian constitutional value, characterizing it as multiethnic country. It gets explicit in art. 215 and 216 of the Constitution when imposes to the State the duty “to guarantee to all the full cultural right of action and access to the sources of the national culture, and will support and stimulate the valuation and the diffusion of the cultural manifestations (art. 215)”. Article 216 consecrates that: “The goods of material and incorporeal nature Constitute Brazilian cultural patrimony, taken individually or in set, carriers of reference to the identity, the action, the memory of the different groups that form the Brazilian society”. (Pereira, 2002)

Belfrot (2006, 29) writes concerning the paradigm change occurred in the Constitution of 88:

It deserves distinction, however, the change of paradigm materialized in the 1988 Constitution, when pointing out in the public sphere, of definitive form, all the questions related to the indigenous societies: the landmark and protection of traditional lands, the education they destined and the possibility to enter judgment in the defense of its rights, aiming to conflict solution, assuring Public Federal prosecution intervention in its defense in all the acts of the process.

For Belfort (2006), before the 1988 Constitution, the indigenous legislation was being guided by two paradigms: extermination and integration; and, after that, original rights are clearly recognized and its guarantees are magnified. Thus, the constitution distinguishes itself from the two previous when does not consider the indigenous population in extinction, but as a population that has original rights, these refers to rights that already existed before the creation of the Brazilian State, the time that historically Portugal occupied the Brazilian territory.

The article 231 of Federal Constitution and its paragraphs bring the occurred modifications and the paradigm changes through the recognition and equality of rights to the indigenous how much its social organization, customs, languages, beliefs and



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



traditions. It assures the original right on the lands that they occupy as a preexisting right, independent of legitimation. As indigenous lands, they are property from the Union, which must demarcate, protect and make the society respect all their possessions. §1° creates the concept of indigenous land as being the

“traditionally occupied land for the indigenous inhabited them in permanent character, the used ones for its productive activities, essential to the preservation of the necessary environmental resources its well-being and necessary its physical and cultural reproduction, per its uses, customs and traditions” (§1°, art. 231, CF).

The permanent ownership of traditionally occupied lands, as well as the exclusive resources fruition of the land, the rivers and the lakes in existing them is assured in §2° of art. 231. Therefore, the exclusive fruition the exploitation of the hydric resources, enclosed the energy potentials, the research and cultivates it of the mineral wealth in indigenous land only can be accomplished with authorization of the National Congress, heard the affected communities, being assured participation to them in the results of cultivates, in the form of the law (§3° of art. 231).

To guarantee the original rights, the permanent ownership and the fruition of the natural resources § 6° foresees that they are null and extinct, not producing effect legal, the acts that have for object the occupation, the domain and the ownership of lands the one that if relates this article, or the exploration of the natural wealth of the ground, the rivers and the lakes in existing them, excepted excellent public interest of the Union, according to that to make use complementary law, not generating the nullity and the extinguishing right the indemnity or the action against the Union, except for, in the form of the law, how much improvements derived from the good-faith occupation.

The improvements to indigenous people made possible through the Federal Constitution of 1988 will be discussed in the following section of this article, which brings empirical information over those improvements.

2. Improvements for the indigenous people after 1988

2.1. Indigenous Areas obtained, registered and the complementary legislation

As the Constitution of 1988 defined that the traditional indigenous occupied land areas should be transformed in State owned land for permanent use of the Indigenes



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



people, this part of the paper will show how this happened. The Decree N. 1.775 of 8 of January of 1996, which complemented to Constitution, defined that the Indigenous National Foundation (FUNAI) would be the institution responsible for the process of demarcation. This legislation defines that the process of demarcation involves five phases until the indigenous land is duly registered in the Notary's office of Real Estate record.

According to FUNAI the phases are:

- **In study:** Accomplishment of anthropological, historical, agrarian, cartographic and ambient the studies, that base the identification and delimitation of the aboriginal land.
- **Delimited:** Lands that had had the studies approved for the Presidency of the Funai, with its conclusion published in Federal official gazette and of the State, and that they meet in the phase of the administrative contradictory or in analysis for the Ministry of Justice, for decision concerning the Declared expedition of Would carry Declaratory of the aboriginal traditional
- **Ownership:** Lands that had gotten the expedition of Declaratory Portaria for the Minister of Justice and are authorized to be demarcated physically, with the materialization of landmarks and georeferenced.
- **Homologated:** Lands that possess its materialized limits and georeferenced, whose administrative landmark was homologated by Presidential decree.
- **Regularized:** Lands that, the homologation decree had after been registered in Notary's office on behalf of the Union and the Secretariat of the Patrimony of the Union.
- **Interdicted:** Interdicted areas, with restrictions of use and ingression of third, for the protection of isolated aboriginal peoples.

The improvement of the situation of the indigenous population with the guaranties to their land that happened after the promulgation of the Constitution of 1988 was a considerable increase in the amount of demarcated areas, homologation and regularization of indigenous land with measure of protection to these peoples.

Based on data from the National Foundation of the Indigenous - FUNAI before the Constitution of 1988, in Brazil existed about 70 Indigenous areas occupying



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



4.610.764, 72 hectares (FUNAI, 2017). As can be seen in table 4, after the legislative changes, the country has 562 Indigenous areas summing up a total of 116.997.082,25 ha. In figure 2 these Indigenous areas can be seen in their localization in the Amazon region. There are also some in the states from the map From these 435 occupying 105.648.344,25 ha are already regularized on behalf of the Union and fruition of the indigenous peoples, the remain is in regularization phase. The FUNAI still is in phase of study of 5.769 has and with It would carry of Interdiction in 1.084.049 has, that is, these areas are those with use restriction and ingression of third for protection of the isolated native populations.

Table 1. Indigenous land obtained, regularized and in process after 1988's Constitution, Brazil, 2017

FASE DO PROCESSO	QUANTIDADE	SUPERFÍCIE (HA)
Delimitada	38	5.531.936,68
Declarada	72	3.415.646,67
Homologada	17	1.506.696,90
Regularizada	435	105.648.344,89
TOTAL	562	116.997.082,25
Em estudo	114	5.769,00
Portaria de Interdição	6	1.084.049,00
TOTAL	120	1.089.818,00

Source: FUNAI, 2017.

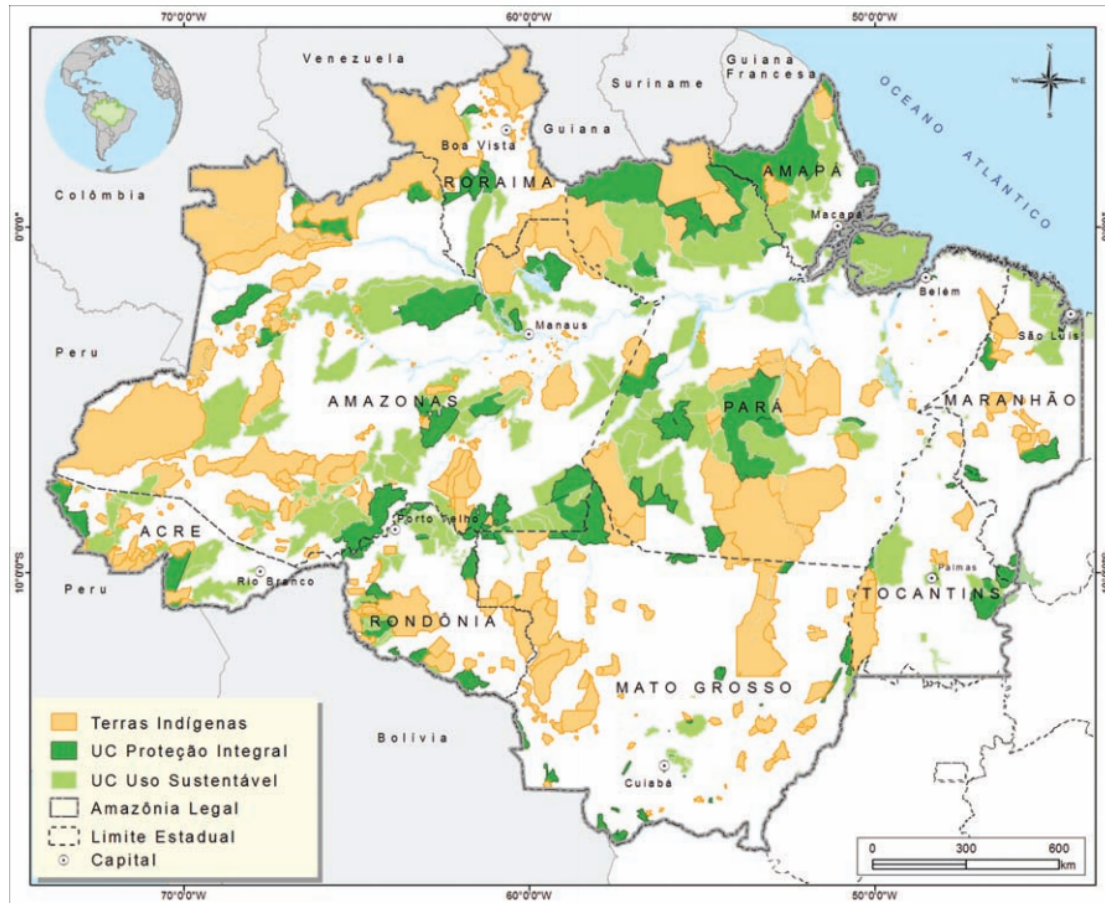
The growth of the indigenous land obtained and regularized traditionally by the indigenous is more than what considerable, in view of that it passed of 4.610.764, 72 hectares, to approximately 117 million hectares. The landmark of indigenous lands has as reflected the growth of the aboriginal population in Brazil from years 90, Thus, sees that the rule used for the Convention n° 169 of the OIT and talked back by the Constitution of 1998, of that without the territory landmark and protection of this it would not have as to protect and to guarantee the existence of these peoples.

Figure 1. Protected areas in the Legal Amazon, 2010



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



Source: Imazon, Isa (2011, p. 15). Translation: “Terras Indígenas”: Indigenous Lands; “UC Proteção Integral”: Integral Protection Conservancy Units; “UC Uso Sustentável”: Sustainable Use Conservancy Units”; “Amazônia Legal”: Legal Amazon; “Limite Estadual”: state boundaries.

2.2. Brazilian indigenous people improvement indicators

As seen in the previous section, the changes brought forth by the 1988 Constitution and the nº 169 International Labour Organization Convention allowed simultaneously the acknowledgment of the indigenous peoples’ civic capacity and their autonomy, as it pushed back ethnocentric values that strengthened differences between State and indigenous peoples (FUNAI, 2017). In addition to creating common juridical-political scenery to all Brazilian citizens, the new regulation mark assured the respect to the social organization, mores, beliefs and traditions, as well as original right to lands they traditionally occupy, being the State’s responsibility to delimit, protect them and ensure the respect to their belongings (CF/88 art. 231). In this section, our goal is to introduce the improvements achieved with the current regulation, analyzing: 1. the

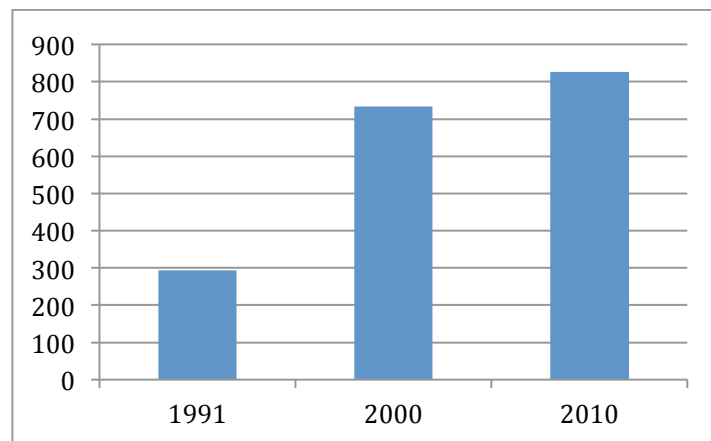


population growth, as well as indicators linked to health and education; 2. the changes related to the indigenous' territory expansion.

According to Marta Azevedo in an interview¹, at the time the Europeans arrived in Brazil, it is estimated that the original indigenous population was 3 million people from more than 1000 different ethnicities that were decimated by the colonizers. In 1957 it was estimated that the remaining indigenous population was around 70 thousand. The absolute growth of their population can be observed after the 1980s.

According to the 2010 Census, in Brazil there are 826.9 thousand indigenous people from 305 ethnicities that speak 274 languages. Since 1991, when the first research in the actual model was made the indigenous population grew 205%, whereas at the beginning of the 1990's the indigenous population was of 294 thousand individuals in the country (IBGE, 2012b).

Graph 1. Indigenous population, Brazil



Source: IBGE, 2012b.

According to IBGE, the indigenous population growth was perceived only in rural areas, highlighting the Northern region that holds 48.6% of the indigenous living in the countryside. Furthermore, it's worth mentioning that between 2000 and 2010, the increase of its population of 3.7% per year, of that highlighting a growth of 4.7% in the Northeast region (IBGE, 2012b). It's necessary to point out that from the 896.9 thousand indigenes accounted for in 2010, 63.8% were in the countryside, showing

¹ According to an interview in 2014, from the *Pragmatismo Politico* website (link:



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



the opposite of what was seen in 2000, when 52% were in urban area (BRASIL247, 2012).

For some public policy analysts, the positive behavior of indigenous population growth is linked to the growth of public policies in favor of that group. The child mortality rate, for example, is an interesting index to see if there were or not advances to the indigenous health after the 1988 Constitution and the development of government policies and programs in that segment, once that indicator is direct or indirectly linked to the basic sanitation conditions and access to health services (IBGE, 2005)². From 1998 to 2005, for example, the child mortality index decreased from 96.8/thousand to 53.1/thousand, revealing a positive change in this index (IBGE, 2005). Meanwhile, the overall coefficient of indigenous mortality, between the 1990's and the beginning of the first decade of the 21st century also showed a decrease between 1998 and 2005 – 12.8 thousand to 4.77 thousand, respectively.

Table 2. Indigenous mortality per thousand inhabitants

Year	Overall Coefficient of Indigenous Mortality
1998	12.8
2001	6.13
2002	5.79
2003	5.16
2004	4.61
2005	4.77

Source: CISI/CNS, 2006.

In the education field, the 1988 Federal Constitution also made significant changes for the indigenous peoples, since it had assured them the right to a differentiated education, specific, inter-cultural and bilingual, what in turn ensured not only those peoples' physical but also ethnic survival.

From the basic notion of what was one of the main school education policies for the indigenous peoples conducted by the Federal Government, it's essential to analyse if these had a positive effect upon the indigenous population in National Territory. For the actual investigation, we'll analyze in Table 3 the literacy and illiteracy rates, based

² Following the World Health Organization classification, child mortality indexes are normally high (50 per thousand or more), medium (between 20 and 49 per thousand) and low (under 20 per thousand).



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



on the 2010 Demographic Census – Indigenous General characteristics. According to IBGE (2012a), was considered literate any individual that could read and write at least a note in Portuguese and/or in its indigenous language. We observe, this way, that the gathering of these data doesn't allow deepening of information, based on the difficulty to understand the knowing of traditional knowledge, especially the use of indigenous language.

Table 3. Indigenous population educational characteristics - people aged 15+ (1991/2010)

Literacy Rate	1991	2000	2010
TOTAL	49.2	73.9	76.7
Urban	75.2	86.2	88.1
Rural	37.6	54.5	66.6
Illiteracy Rate	1991	2000	2010
TOTAL	50.8	26.1	23.3
Urban	24.8	13.8	11.9
Rural	62.4	45.5	33.4

SOURCE: IBGE, 2012a

As can be seen on the table 3, the literacy rate, including both in Portuguese and in indigenous language, presented between 1991 and 2010 a progressive growth, going from 49.2% to 76.7%. According to IBGE, the main reason for this improvement consists of the increase on indigenous declarations in the urban segment during the 2000 Census.

Contrary to what is seen in the overall Brazilian population, the masculine indigenous literacy rate is higher than the feminine, 52.8% against 45.5% in 1991, 76.3% versus 71.6% in 2000 and 78.4% against 75% in 2010. Another interesting information is that the highlighted population's basic education improved in most of Brazilian states. According to IBGE, the most developed regions, emphasizing the Southeast region, have higher literacy rates – 79.5%, 87.2% and 89.7% in 1991, 2000 and 2010, respectively, and the least developed regions show lower rates, like the North – 39%, 56.8% and 68.0% for the same years.



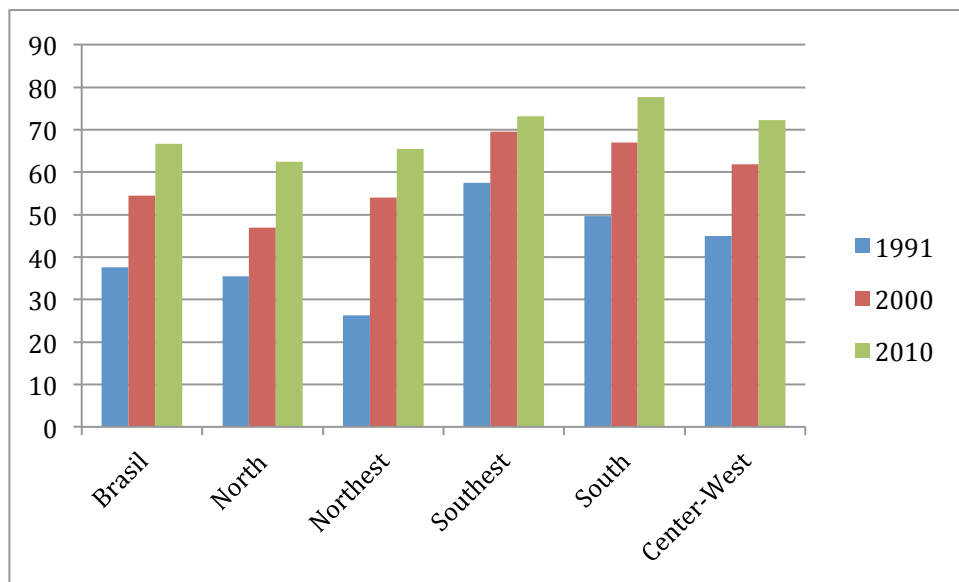
Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



The Graph 2, in its turn, gives us more specific information, once shows the indigenous population's literacy rate in the rural area. Regarding the Northern region, we can see that the growth of said rate was relatively constant, even though between 2000-2010 it had a slightly higher increase than between 1991-2000. The Northeast region on the other hand, presented in the first period of time the highest growth rate among the 5 regions in both intervals – approximately 33%.

Graph 2. Brazilian rural indigenous population educational characteristics - indigenous people aged 15+ (1991/2010)



SOURCE: IBGE, 2012a

Another relevant figure to be analyzed is the amount of indigenous schools that resulted from the partnership between MEC and local leaderships. As we can see, there's a constant increase of this index, especially the period 2002-2003, when the amount of indigenous schools increased by 300. The following years continued progressively, even though presented a lower growth rate, between 100 and 150 more from one year to the next (Table 5).

Table 4. Number of indigenous schools

Year	Amount of schools
1999	1392
2002	1706
2003	2079
2004	2233



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



2005	2327
2006	2427
2007	2550
2008	2698

Source: INEP/MEC, 2009.

So, can be seen, that the 1988 Constitution brought some important changes to the indigenous peoples in Brazil, such as population growth, decrease in child and general mortality rate, increase in literacy rate and the amount of schools that aims to consolidate programs that combine governmental institutions and indigenous leaderships. Even though, is known that there are still many challenges to overcome in order to conquer civil rights for this population, there is a need to highlight the positive results of a more active Brazilian regulatory mark and governmental policies that intend to ensure indigenous civil rights.

3. Sources of pressure on indigenous territories: agribusiness

3.1. Agricultural frontier expansion and deforestation

As section 1 exposed, the weak land governance is one of the main causes of the lack of control over the expansion of the agricultural frontier and deforestation on the Legal Amazon.

The southeastern region of the Legal Amazon coincides with the area in which the internal frontier (or agricultural frontier) is currently expanding. It is important to note that Brazil is one of the few countries left in which the internal frontier is still expanding and its expansion operated and still operates through an historical pattern for centuries. The usual way in which it happens is through the occupation of public vacant land (terras devolutas), deforestation, land use change for pasture and later legitimation of it as formal private property (Fernandes, 2014). Weak land governance and especially lack of control over public land is a required condition for this process to happen - and usually in these expansion areas is where it is weakest (Reydon, Fernandes, Telles, 2015). Already in the 1990's it was estimated that at least 80% of the deforested areas in the Legal Amazon were under cattle pastures or under secondary forest in pasture that has been degraded or abandoned (Fearnside, 2001).



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



A study of Brazilian land-use patterns from 1975 to 2006 shows that in agricultural frontier areas land-use intensification coincided with expansion of agricultural lands (Barreto et al, 2013). This supports the thesis that technological improvements create incentives for expansion in the agricultural frontier areas and that farmers are likely to reduce their managed acreage only if land becomes a scarce resource. As pointed early, one of the characteristics of the Brazilian frontier is exactly the existence of large portions of public land without destination and adequate governmental control over it, leaving them exposed to land grabs. The table X shows data for the Legal Amazon land tenure, where 44.1 % of its area is composed by protected areas (conservancy units (UCs) and indigenous land (Tis)). Also, the table shows 27% of the Legal Amazon area as *terras devolutas* (public unregistered land) and private land in dispute, while 22.7% is in the category of formal private properties.

Figure 2. Land tenure in the Legal Amazon, 2012

Tabela 7. Situação fundiária na Amazônia Legal em 2012.

Estado	Área (milhares de km ²) ^a	Situação fundiária (% da Amazônia)			
		Áreas Protegidas ^b	Áreas especiais ^c	Terras privadas ^d	Terras devolutas e privadas em disputa ^e
Acre	152,6	50,1	11,6	22,8	15,5
Amapá	142,8	70,4	7,8	6,1	15,7
Amazonas	1.570,7	50,9	2,3	2,3	44,5
Maranhão	249,6	26,1	3,8	39,1	31,0
Mato Grosso	903,4	19,8	4,8	52,9	22,3
Pará	1.247,7	55,0	7,9	18	19,1
Rondônia	237,6	46,3	17,1	35,1	1,5
Roraima	224,3	58,3	6,7	7,6	27,4
Tocantins	277,6	21,4	2	51,5	23,2
Amazônia Legal^f	5.006,3	44,1	6,2	22,7	27,0

^a Fonte: IBGE (2010).

^b Refere-se a UCs (incluindo as APAs) e TIs identificadas, declaradas e homologadas, atualizadas até julho de 2010, descontando-se as áreas de sobreposição. Fonte: Oemas e consulta aos decretos federais e estaduais de criação das UCs (Imazon e ISA, 2012).

^c Fonte: Incra (2002) e Comissão Pró-Índio de São Paulo (2005). Inclui as terras militares até 2009, áreas de comunidades quilombolas até 2005 e assentamentos rurais até 2002 (Comissão Pró-Índio de São Paulo, 2005).

^d Área total das propriedades privadas declaradas no Censo Agropecuário de 2006 (IBGE, 2007b).

^e Incluem as áreas privadas não declaradas no Censo Agropecuário de 2006.

^f Consideramos neste cálculo somente as áreas dos Estados do Maranhão e Tocantins inseridas na Amazônia Legal.

Source: Daniel et al 2013, p 21.

Figure 2 (on page 11) brings the mapping of the Protected Areas in the Amazon, where it is possible to see the increase of protected areas to the north and west directions – or the further away from the agricultural frontier.



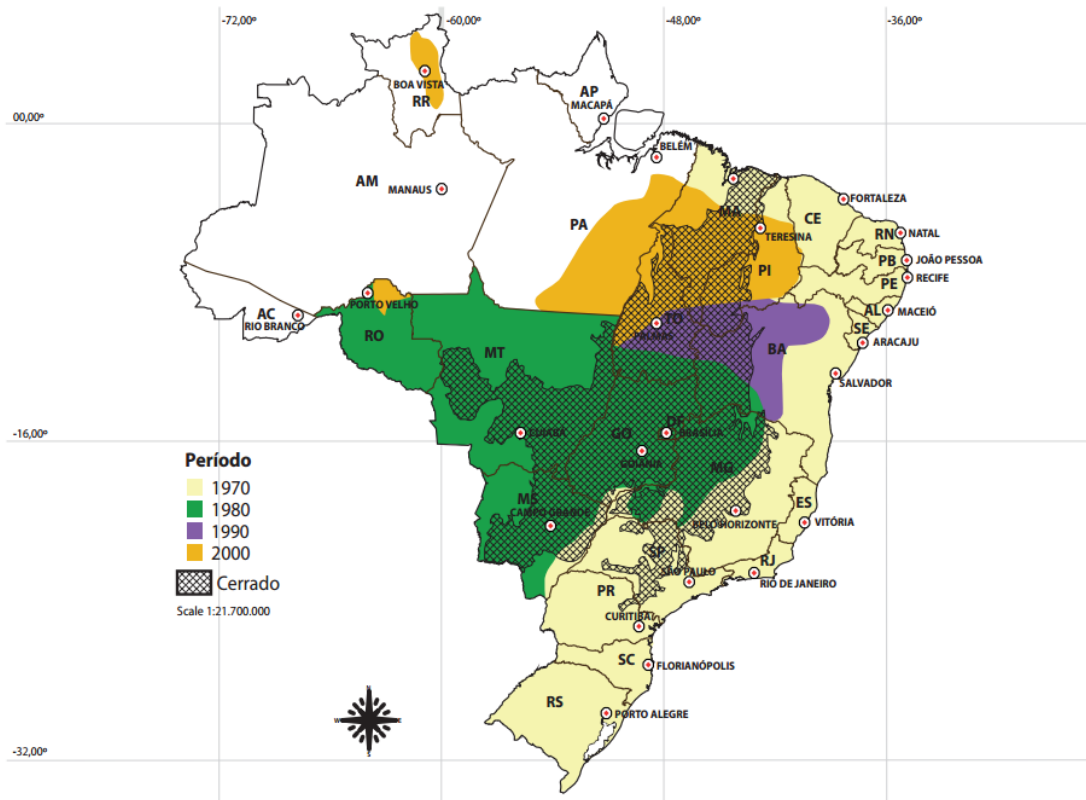
Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



Brazilian agricultural frontier has been expanding since colonial times, with different intensities. In the last 5 decades it has expanded faster than ever before, given the increase in population, technological advances and government incentives. Figure 3 represents the advances of the frontier between the 1970's and the 2000's, clearly depicting the latest expansion of agriculture towards the cerrado biome east of the Legal Amazon, which is known as the MATOPIBA (cerrado areas of the states of Maranhão, Tocantins, Piauí and Bahia).

Figure 3. Agricultural frontier from 1970's to 2000's



Source: Vieira Filho (2016), p. 13.

Comparing the two previous maps it becomes clear that the agricultural frontier expansion coincides with many indigenous lands, especially on the southeastern part the state of Pará and Mato Grosso. This, per se, points to an increase in the human pressure over those protected areas.

3.2. Xingu river basin case

The Xingu Indigenous Park (PIX) is a paradigmatic case since it is the first Indigenous Land created by the government after a campaign by the Villas-Boas



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



brothers. It was created by a decree in 1961 with one quarter of its original proposed size. After adjustments in 1961, 1968 and 1971 the final demarcation came in 1978. Its actual size is 2,642,003 hectares according to the government agency responsible for its administration (ICMBio).

Later on, indigenous lands and other protected areas were created to form what is called the Xingu river basin protected areas mosaic, which includes many other Indigenous Lands and Protected Areas and goes from the Xingu River springs around and inside the PIX (to the south), on Mato Grosso state, throughout the river's path northward into the state of Pará, where Xingu river flows to the Amazon River. Besides the Kayapó Indigenous Land with 3.2 million hectares, there are other protected areas forming the mosaic, which sums up a total of roughly 280,000 km² or 28 million hectares (Schwartzman et al 2013).

The pressure from both the Mato Grosso soya crop producers to the south and the Pará cattle-ranchers on the eastern part of the mosaic is ongoing and leads to conflicts related to conflicting land uses for these areas.

Figure 4 below helps portraying the intense pressure that the expanding frontier does on the protected areas and, especially, the indigenous lands on the Xingu river basin. It can be noted that in the state of Mato Grosso, degradation of upper head-waters appear to be increasing threats where the deforested area was transformed into large-scale soya farms. Also in the same figure, going up to the mid-east, the pressure from cattle ranching can be seen clearly – especially in the Triunfo do Xingu Environmental Protection Area (n. 29 on the figure).

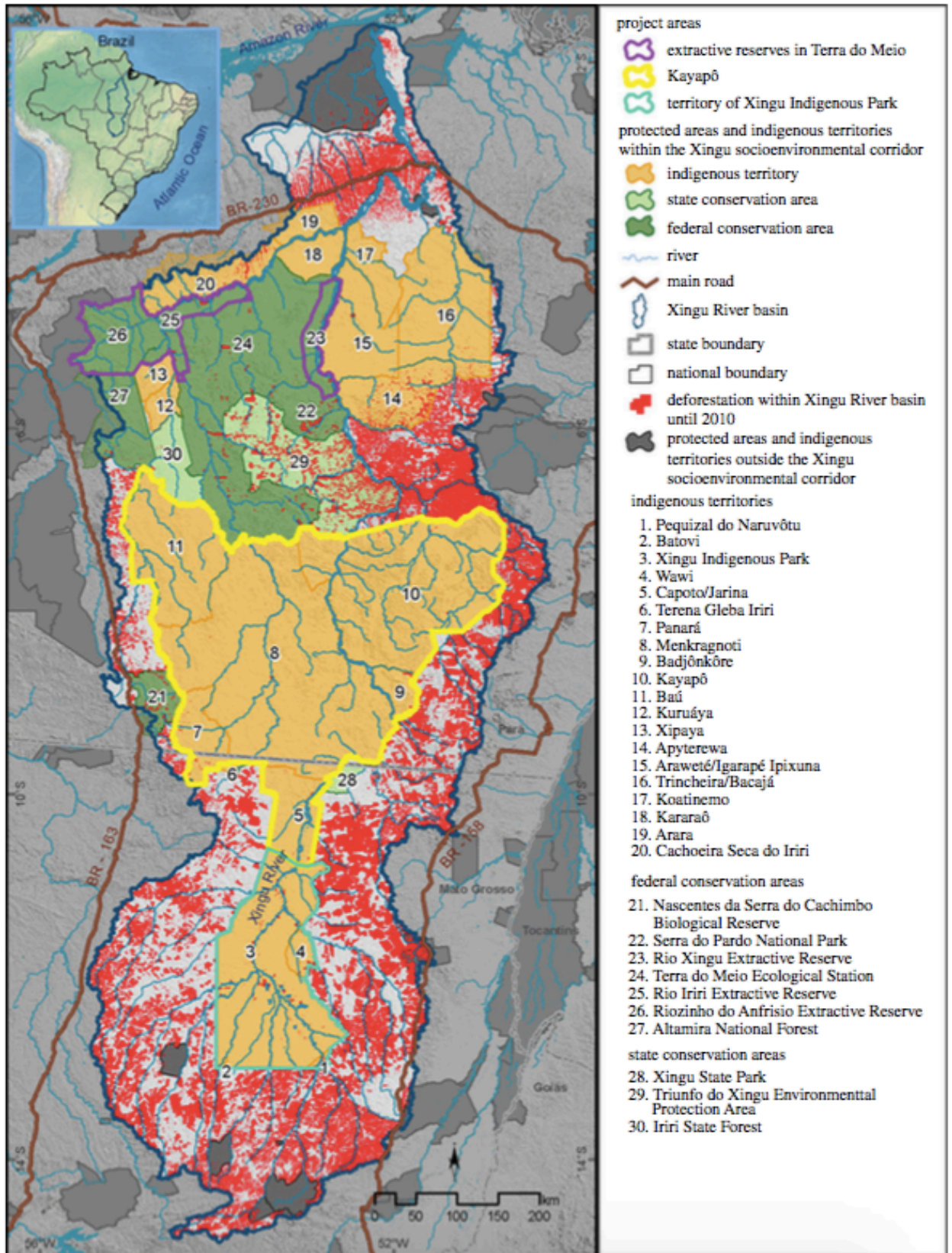


Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



Figure 4. Xingu river basin protected areas and deforestation





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ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017

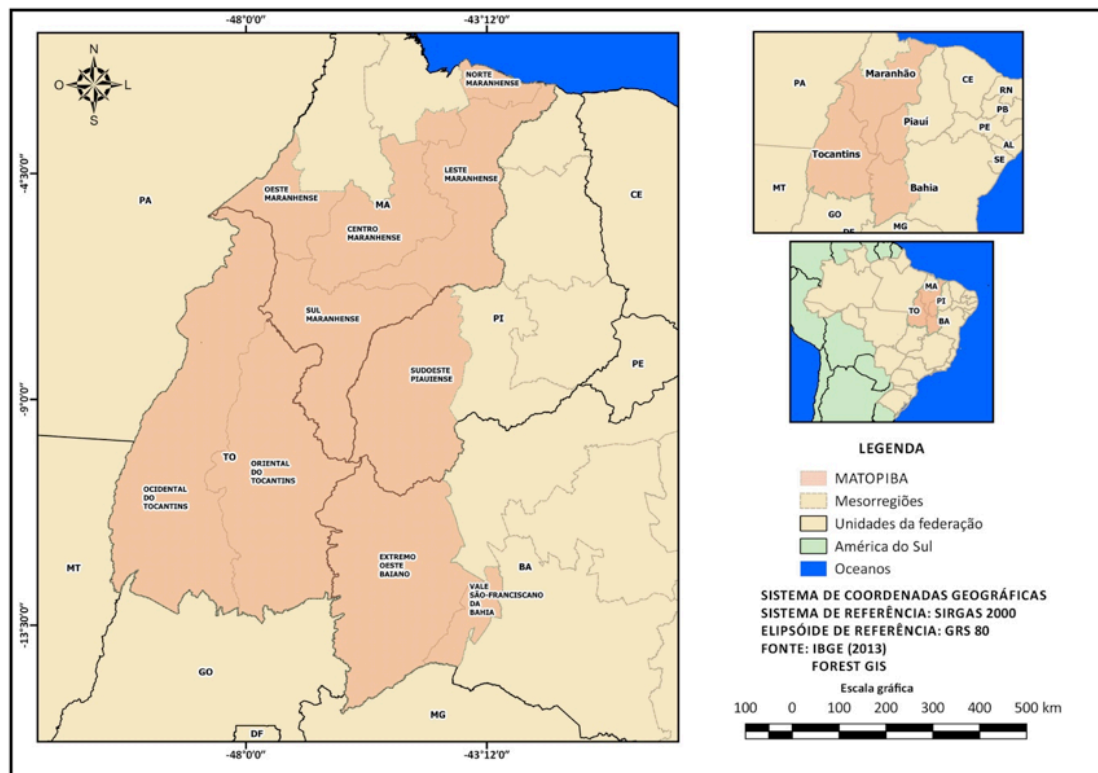


Source: Schartzman 2013, p. 2.

3.3. MATOPIBA's cerrado case

According to Emprapa (Miranda et al, 2014), the Matopiba region has 73 million hectares and over 90% of it lies within the Cerrado biome inside the states of Maranhão, Tocantins, Piauí and Bahia, an area bigger than Germany. Figure X shows the general geographical location of the Matopiba.

Figure 5. Spatial location of the Matopiba region



Source: Silva et al, 2015.

This region also contains 28 indigenous lands, 42 protection areas, 865 land reform settlements and 34 quilombola lands. Figure X portrays the location of those protected areas, indigenous and quilombola lands and land-reform settlements.

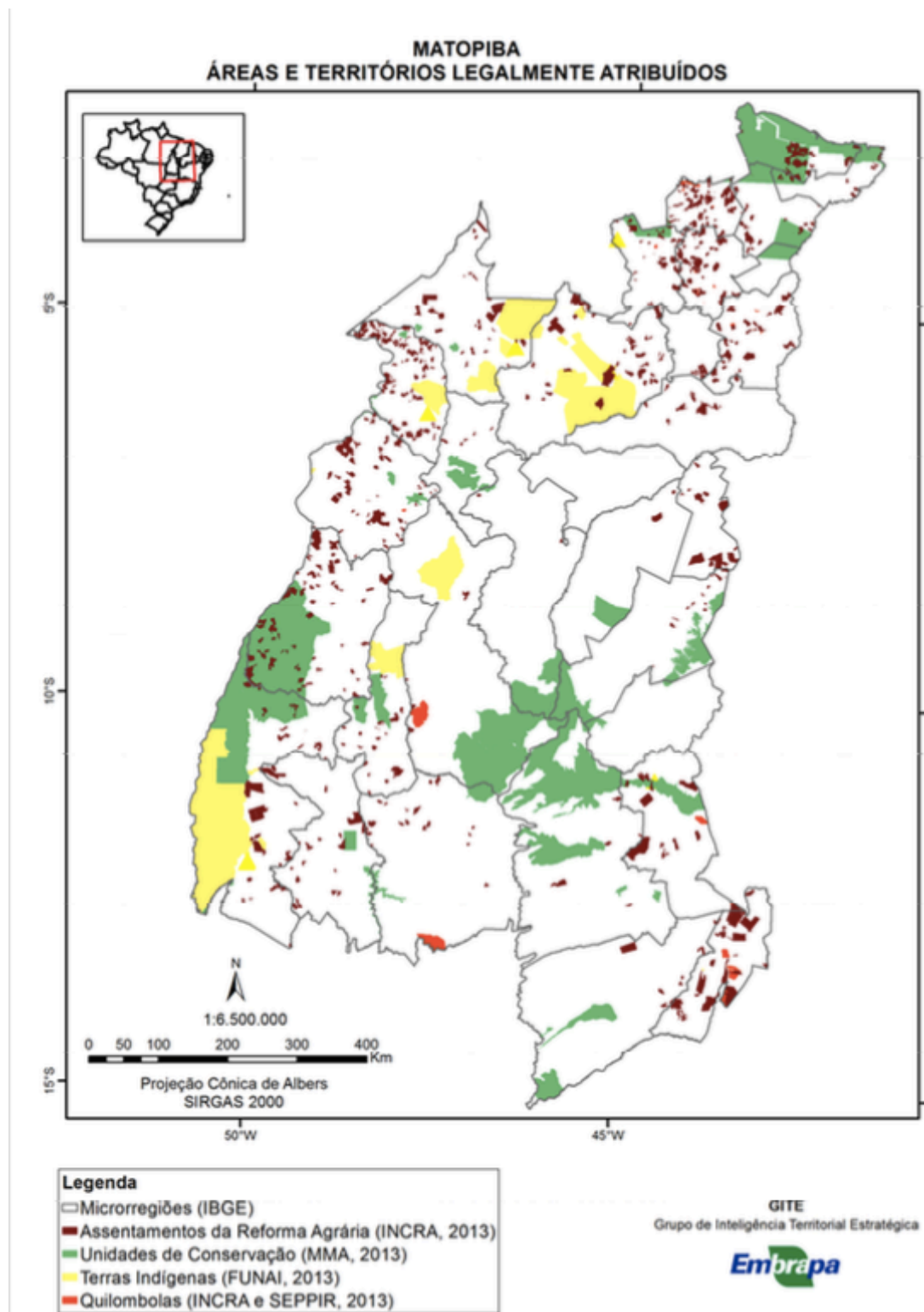


Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



Figure 6. Land-reform settlements, Protected Areas, Indigenous and quilombola lands in the Matopiba



Source: Miranda et al (2014b)



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



The cerrado biome is critically important, yet neglected - especially if compared to the efforts to preserve the tropical forest biome of Amazônia. Once the cerrado covered nearly a quarter of Brazil, now this poorly protected biome has already lost at least 50% of native vegetation cover (Klink & Machado 2005, Sano et al. 2010). The recently created region of the Matopiba has seen an increase in cultivated crop area of 86% in the 2005-2014 period - against the national average of 26% (Spera et al, 2016). This is already a clear indicator of the pressure this region is under, especially the protected areas and indigenous lands. Another factor of pressure is the difference between the required legal reserves with native vegetation per property: for the Amazon it is required 80% of legal reserve while in the Cerrado the requirement is only 20% unless the property falls on the Legal Amazon, where the required legal reserve increases to 35%.

Analyzing satellite imagery for the Matopiba region between 2003 to 2013, Spera et al (2016) found that aggregate cropland area almost doubled from 1.3 million hectares to 2.5 million hectares and an additional 1 million hectares had been converted and later left fallow or used for other purposes over the decade. The study also points that the majority of this area were cleared from natural Cerrado.

One of the most debatable recent actions was the presidential decree n. 8,447/2015, also known as the PDA (Agriculture and Cattle-raising Development Plan) focused on the the Matopiba region. It represents an intensification of the process of expanding the agricultural frontier over the cerrado biome in the north and northeastern Brazil (Heck and Menezes, 2016:8).

Conflicts involving indigenous lands abound on the region and tend to increase in the following years. One example is the conflict with Apinajé people in the northern part of Tocantins. In 2005, the northern part of the land claimed by the Apinajé as theirs started being deforested illegally for planting eucalyptus trees. This process continued in 2013 with the deforestation of areas around the Transamazonica federal road (BR230), to the southwest of the Apinajé's land. Agian, in 2014, a private farmer acquired formal licenses with the environmental agency of Tocantins to deforest part of their land for cattle raising (Heck and Menezes, 2016:9). Moreover, in December 10 of 2015 six indigenous people leaders were received by the human rights branch of the UN in Brasília to report on the violence and land grabs they were suffering,



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



especially in the Matopiba region (Porantim, 2016:13). In the state of Maranhão, indigenous and quilombolas leaderships are constantly threatened and it is common for them to get assassinated by militias paid by the large farmers (CIMI, 2016a).

From the total registered murders of indigenous people related to land conflicts in 2015 (54 murders), 13 were in states that are part of the Matopiba region (3 in the state of Maranhão, 5 in Tocantins, 5 in Bahia). Moreover, in the four states that conform the Matopiba region, for the year of 2015 alone, it was registered: 54 incidents of violence against indigenous land and 46 incidents of violence against indigenous individuals (CIMI, 2016b).

4. Sources of pressure on indigenous territories: large-scale infrastructure projects

Since colonial times and especially after mid 20th century, the developmentalism approach by the Brazilian State implies in accelerating the expansion of the agricultural frontier as one of its vectors, thus encouraging access to new lands and exploitation of natural resources, thus intensifying the transformation of forests and cerrados into farms for agriculture or cattle raising uses. For that to be accomplished, investments in infrastructure, such as roads and hydroelectric dams, are also perceived to be necessary, being at the core of Brazil's development strategies for the since the 1960's. After the end of the military regime in the 1980's the geopolitical concerns that boosted the development of Brazilian hinterland faded, but the policy of focusing on large infrastructures projects persists. (Carvalho et al, 2014)

Even after the re-democratization of Brazil, those directly responsible for building infrastructure are closely aligned with business interests and the construction sector (Abers et al, 2016). The expression “bonding capitalism” (*capitalism de laços*) is a concept that is useful in the scope of this article, since it can be identified in projects and investment decisions influenced by social contracts and political criteria. In it, according to the author that invented the expression (Lazzarini, 2011), entrepreneurial decisions are made based on individual ideologies and not economic ends per se.

The development of lobbies is a good example of this kind of Brazilian crony capitalism or “bonding capitalism” as Lazzarini puts it: the companies search for initiatives that can get them benefits as in, for example, supporting a politician – and



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



increasing his chance of a successful campaign - and later transforming themselves in their client when the person is elected. In this clientelistic environment, if elected the politician would owe the companies some favors (as incentivizing public investment in regions near the industrial plants of the companies, etc.).

Throughout the last decades, the Brazilian government has allowed the construction companies to put their interest before the demands for better living conditions of local populations. In the Amazon, for example, the construction of roads is responsible for at least two thirds of the deforestation in a 50 km zone around its margins (Nepstad et al, 2001). The lack of commitment from the State to sensible regions affected by road construction leads to a disorderly occupation of the territory, usually through land grabbing of public land and predatory exploitation of natural resources. As we shall see later in this section, an emblematic case was the paving of the northern BR 163, a road that joins Cuiabá to Santarém, in which the beginning of its paving was announced in 2003 by the Brazilian President as a project in association with large soya producer companies and its implementation was not followed by the prevention or mitigation of socio-environmental side effects (Santarelli, 2007).

4.1. Development policies after 1988 and conflicts related to indigenous lands

After contextualizing the kind of crony capitalism that leads Brazilian development, it is possible to analyze at a glance the different policies affecting the Cerrado and Amazon biomes and its relation to Indigenous Lands.

In the end of the 1980's the National Plan for Electric Energy 1987-2010 already outlined over 30 dams to be built on the Amazon rivers (Cummings, 1995:152). The main development programs as the *Brasil em Ação* (PPA 1996-1999), *Avança Brasil* (PPA 2000-2003) and the following PAC I and II were based on large-scale road building or improving, creation of hydroelectric dams and settling indigenous people in environmentally protected areas - and they did not acknowledge the indigenous people cultural connection to particular lands (Zhourri, 2010).

Brasil em Ação planned the improvement of BR 364 (Brasília-Acre), BR 163 (Cuiabá-Santarém) and BR 174 (Manaus-Boa Vista); the creation of the Araguaia-Tocantins and Madeira waterways. The following program, *Avança Brasil*, planned to integrate the Legal Amazon with four multimodal transportation corridors utilizing



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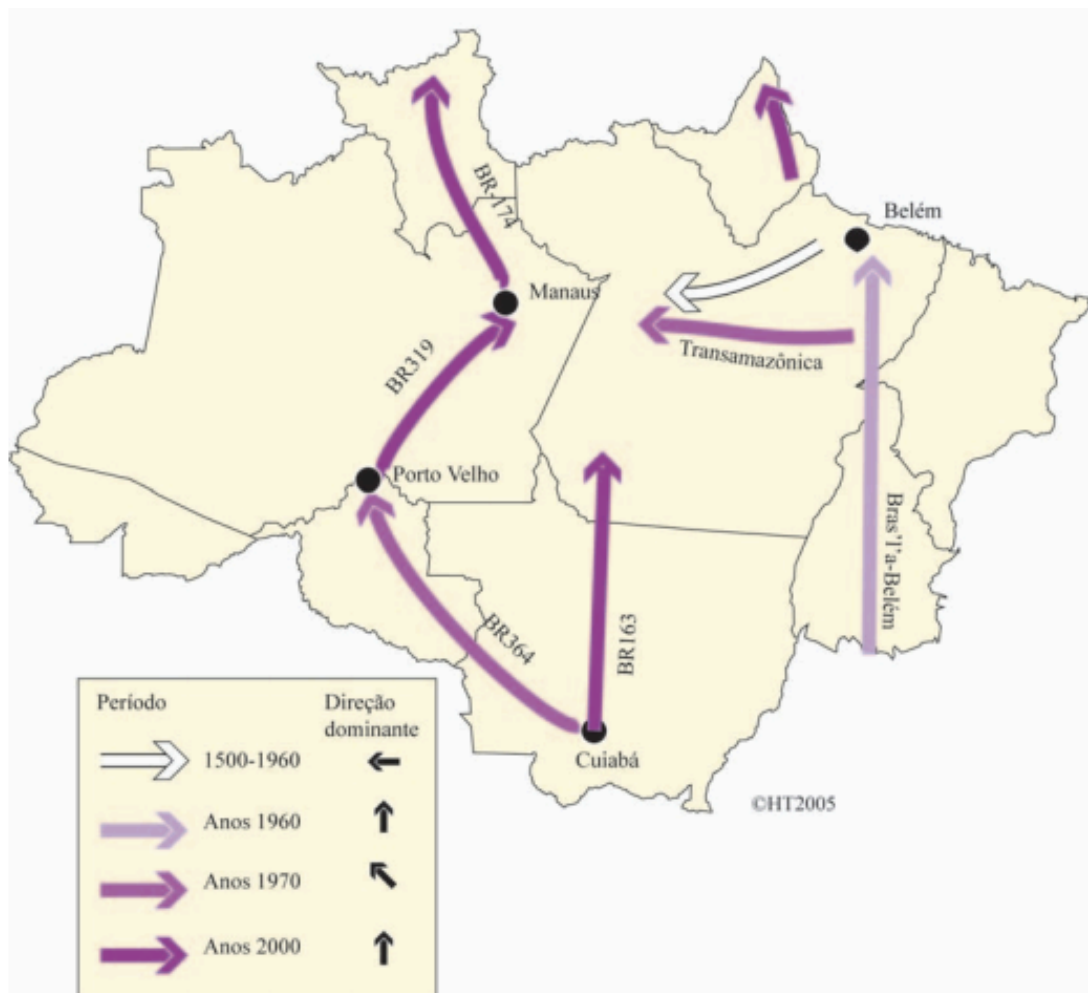
ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



roads and waterways. The civil society and scientists protested against several of those plans, achieving to stop some of those large-scale projects, as the Araguaia-Tocantins waterway.

Théry (2005, p. 48) shows the main axes of transportation over the Brazilian Amazon divided in decades (Figure 7). It can be seen that the “heart” of the Amazon, which was protected a couple of decades ago, is now directly affected by the frontier expansion. Needless to say, the majority of Indigenous Lands are located deep in the Legal Amazon region.

Figure 7. Main axes of transportation in the Amazon



Source: Théry, 2005, p. 48.

The Growth Acceleration Program or PAC, created in 2007, aimed at investing in large-scale infrastructure projects as to promote sustainable and accelerated growth. According to the Planning Ministry, the program positively contributed to



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



employment and income generation as it increased public and private investment, even though it was implemented during the international economic crisis of 2008-2009 (PAC, 2017). As for the Indigenous Lands, It is important to note that the majority of the infrastructure projects did not take into serious consideration the protection of Indigenous Lands, treating them as “invisible territories” (CIMI, 2011).

Near 55% of the PAC budget was directed to finance energy infrastructure, mainly large dams. Several projects that were criticized in the 1980s for their environmental and social impacts made a comeback under PAC I, as in the case of Belo Monte dam, in the Xingu river, and the Jirau and Santo Antônio dams, in the Tocantins river (Zhou, 2010:263). As usual, the Amazon was seen as where the country’s largest untapped hydroelectric reserves were located and improving the region’s roads would also contribute to the national economy, providing better access to international ports for the large agricultural region of the Brazilian Midwest (Abers et al 2016).

The result of this carelessness towards Indigenous Lands is one of the most violent aggressions to their people, especially when disguised under legal and institutional formality. Table 6 shows the number of PAC ventures conflicting with Indigenous Lands up to 2009. It numbers 144 water resource-related ventures and 62 road-building ventures conflicting with Indigenous Lands.

Table 5. Number of PAC ventures conflicting with Indigenous Lands (2009)



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



PAC axis	Number of PAC ventures conflicting with Indigenous Lands
Water resources (a)	144
<i>Hydroelectric centrals</i>	<i>81</i>
<i>Hydroelectric plants</i>	<i>41</i>
<i>Other initiatives</i>	<i>22</i>
Energy distribution and transmission (b)	65
Road duplication and paving (c)	62
Total (a) + (c)	206
Total ventures PAC ventures	426

Source: INESC, 2012.

The PAC is reissued in 2010 under the name of PAC II, reinforcing the guidelines of the first program. In the states within the Legal Amazon, the program envisages major investments in sectorial projects focused on energy generation and transportation.

Summing up PAC I and II, in relation to the transportation axis, from the total of 82 planned large-scale projects (roads and waterways), at least 43 conflict, directly (territory) or indirectly (population), with one or more Indigenous Land (Verdum, 2012, p. 12). The distribution of the transportation projects can be seen in the figure 8.



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



Figure 8. Road and waterway projects from PAC affecting indigenous lands, 2012.

UF	TERRESTRE		FLUVIAL		TOTAL	
	Nº OBRAS	Nº OBRAS AFETANDO	Nº OBRAS	Nº OBRAS AFETANDO	Nº OBRAS	Nº OBRAS AFETANDO
AC	1	1			1	1
AM	3	2	34	22	37	24
AP	3	2			3	2
MA	2	2			2	2
MT	9	3			9	3
PA	4	4	6	3	10	7
RO	12	2	2		14	2
RR	1	1			1	1
TO	5	1			5	1
TOTAL	40	18	42	25	82	43

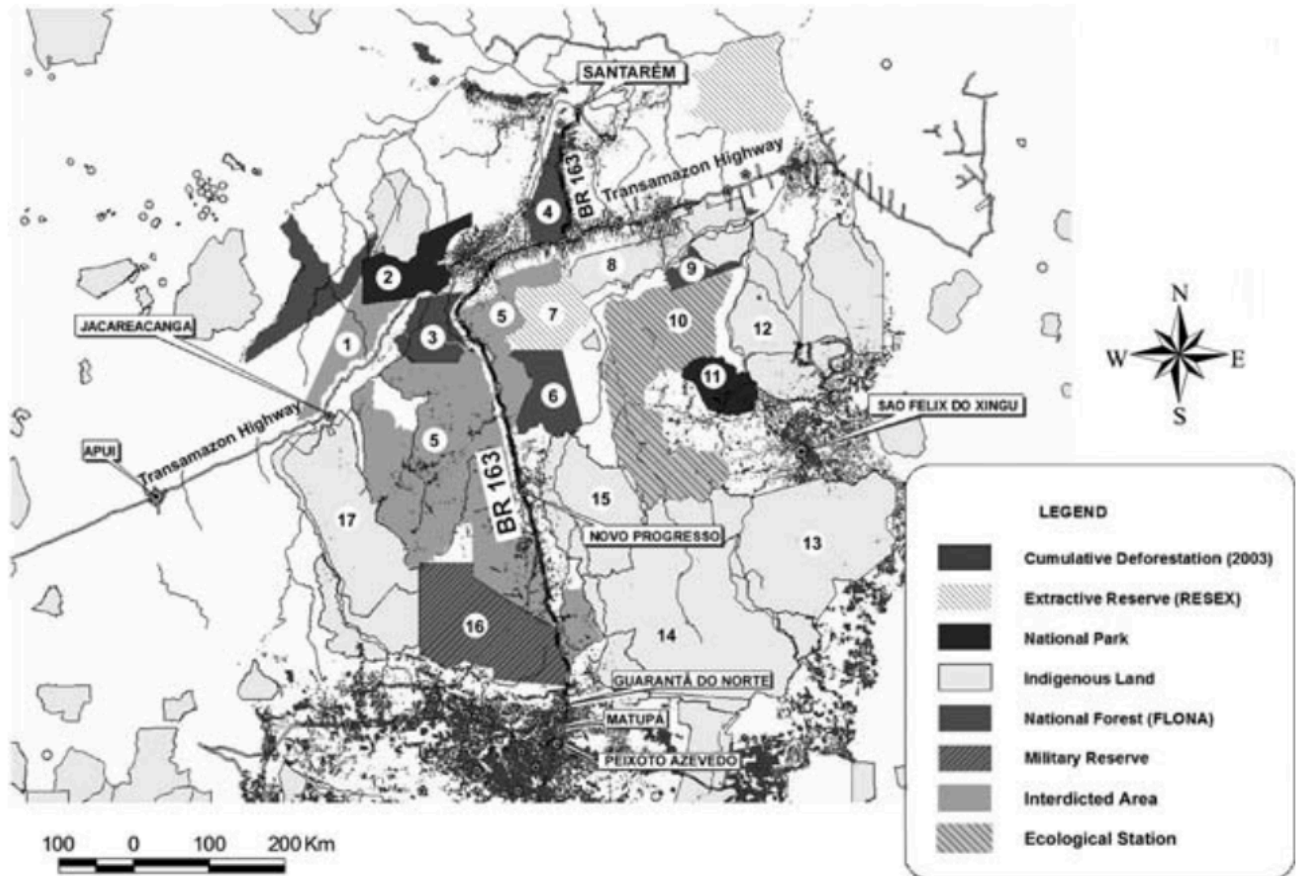
Source: Verdum, 2012.

Between the various new roads and road improvement projects, the case of BR 163 (Cuiabá-Santarém) is possibly the one that causes the greatest impacts. It was predicted that its reconstruction and paving in the state of Pará would have severe impacts in stimulating deforestation and land grabs along the way, especially because the project has been implemented in a scenario of very weak land governance (Fearnside, 2007).

Figure 9, below, draws the location of Indigenous Lands close to the BR 163.



Figure 9. BR 163 northern area of influence (2007)



Source: Fearnside (2007)³.

The BR 163 Sustainable Development Plan officially published in 2006 adopted three main guidelines: promoting development with equity; minimizing illegal deforestation; and strengthening both local civil society and state presence in the region. Nevertheless, reports from 6 years later show that aside from the road being largely paved, the other aspects of the plan had been almost completely ignored (Oliveira, 2015; Baletti, 2012).

³ The area of influence of BR-163 in Pará, including the Transamazon Highway as far west as Apuí, and the Terra do Meio bounded by the Xingu River at São Félix do Xingu. 1=Amaná National Forest; 2=Amazonia National Park; 3=Itaituba National Forest; 4=Tapajo's National Forest; 5=Administratively interdicted areas; 6=Altamira National Forest; 7=Riozinho do Anfrísio Extractive Reserve; 8=Kararaô Indigenous Area; 9= Xingu National Forest; 10=Terra do Meio Ecological Station; 11=Serra do Pardo National Park; 12=Trincheira Bacajá Indigenous Area; 13=Kaiapó Indigenous Area; 14=Mekrangnoti Indigenous Area; 15=Baú Indigenous Area; 16=Cachimbo Military Base; 17=Munduruku Indigenous Area.



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



As for the energy axis, Belo Monte dam is by large the most controverted project. Initially called the Kararaô Dam, it was first proposed in the 1970s as one of a series of dams the military regime hoped to build on the Xingu river. If it had been implemented, it would have flooded 18,000 square kilometers, including 13 indigenous territories (Jaichand and Sampaio, 2013). The project made its way back onto the government agenda in the mid-1990s, with a different design, reducing the flooded area in half and avoiding the flooding of several indigenous lands. In 2005 the federal government asked the legislature for authorization and had it granted without consultations with affected indigenous groups, fact that provoked intense protests. Despite the protests, a preliminary environmental license allowed the public bidding for dam construction and the winning consortium began construction in 2011 (Abers et al, 2016).

Another indirect impact of Belo Monte Dam is the demographic increase in the city of Altamira (PA), which increases the pressure and conflicts over land in the region – especially the several Indigenous Lands. In a conservative estimation, the ISA (Instituto Socioambiental) calculated an approximate sum of R\$ 400 million in timber that had been stolen from the nearby Indigenous Lands in 2014. They also said to believe this is related to the 50% increase in the population of Altamira after the beginning of Belo Monte construction, summing up 150 thousand people (Schreiber, 2015).

The construction of Belo Monte also caused one of the largest migrations of indigenous population for the urban center of Altamira. Federal prosecutors protested and considered the construction of Belo Monte an “ethnocide action” against nine indigenous groups affected by it (CIMI, 2015, p. 139).

Another useful indicator to analyze is the number of indigenous people murdered per year. As table 7 shows, in the years of 2014 and 2015 the number of indigenous people murdered reached a threshold 3 times higher than the average for previous years (CIMI, 2014).

Table 6. Indigenous people murdered per year

Year	Murders
2003	42
2004	37



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



2005	43
2006	58
2007	92
2008	60
2009	60
2010	60
2011	51
2012	60
2013	53
2014	138
2015	137

CIMI, 2014-2015.

Observing the large-scale infrastructure projects that spearheaded the development policy in the Amazon over the last couple decades it is fair to assume that the Brazilian federal government prioritized the construction companies and other powerful groups over the indigenous people and other minorities living in the Amazon. Beyond generating threats to indigenous rights to their land, this policies promoted tension between different groups and favored the mostly illicit prospectors of precious stones and metals and the tree loggers that seek to exploit the indigenous lands (INESC, 2012).

5. Discussion and policy proposals

The first section discussed how the indigenous people had their culture and customs recognized in the Constitution of 1988, as well as the recognition of their rights over land for being the traditional occupants of the Brazilian territory (especially in the article n. 231 of the Constitution). To secure the indigenous land rights the government has to delimit their lands through a lengthy administrative procedure that has been modified several times over the last decades.

The constitutional rigor and the overall weak Brazilian governance over its land sometimes cause protests from occupants and supposed holders of land rights inside lands declared as indigenous since the law states that their land titles are nullified and the only compensation paid is for the improvements built and not the land, thus generating legal insecurity over land rights. Based on that the Constitutional Amendment Proposal (PEC) n. 215 was sent to the Congress in 2000.



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



Since then, more than 10 proposals were annexed to the PEC 215⁴, most of them intending to remove the Executive's authority over the creation of Indigenous Lands and transferring it to the Legislative. If successful it would mean that the creation of new Indigenous Lands and ratification of Indigenous Lands in process of creation would only be possible with the Congress approval.

Another polemic issue of the PEC 215 is its proposal of fixing the date in which the 1988 Constitution was promulgated (October 5, 1988) as the stipulated timeframe to define which indigenous groups traditionally inhabited a given piece of land. This means, objectively, that indigenous groups would not have a claim to their land if they did not occupy it in 1988. The PEC does not take into account indigenous groups that were evicted from their traditional lands and that, due to land conflicts, could not get back to their original territories.

The PEC 215 proposed changes to the Constitution, according to ISA (2015, p. 11-12) would have catastrophic impacts to the indigenous lands:

- The transfer of authority to the Legislative would directly impact the demarcation process of 228 Indigenous Lands yet without homologation, which would be paralyzed – this represents an area of 7,807,539 hectares and an indigenous population of 107,203. Another 144 ILs with their demarcation still judicially processed would also be affected, representing 25,645,453 hectares and an indigenous population of 149,381.
- The opening of Indigenous Lands for economic ventures and large-infrastructure projects. This would potentially affect all the 698 Indigenous Lands.
- The non-expansion of Indigenous Lands proposal would affect 35 ILs representing 1,556,153 hectares and a indigenous population of 33,603.
- The timeframe proposal would impact several ILs already delimited, homologated, registered and others that are in process of delimitation.

In October 27, 2015, the Comissão Especial da Demarcação de Terras Indígenas⁵ approved the PEC 215/2000. After this, the Amendment Proposal went to voting in the Lower House (Câmara dos Deputados) where it will have to be approved by a majority of 3/5 in two different sessions. As for now, the voting attempts backfired and had to be suspended due to large protests from indigenous groups and NGOs.

⁴ The following were annexed to the PEC 215: PEC n. 579/02; 156/03; 257/04; 275/04; 319/04; 37/07; 117/07; 161/07; 291/08; 411/09 and 415/09.

⁵ Special Commission for Indigenous Land Demarcation in a free translation.



Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



The PEC 215 is a concrete example of how even a constitutional enshrined guarantee for the indigenous people land rights can be reverted. This context requires a permanent mobilization from the indigenous population as well as all parts of the civil society that support them.

Policy proposals

1. Land Administration/Governance should be a **State Policy** /it should not be captured by any given government;
2. **LAS creation**: creation of a Land Administration System in Brazil with constraints to political comings and goings - i.e.: a National Land Administration agency that integrates all land actions/policies.
3. **Conclusion of the national integrated cadaster**: since it is a precondition to formulating and properly implementing land governance policies – including indigenous lands governance.
4. **Better coordination** between National, State and municipal level agencies related to land (especially the information exchange between FUNAI and INCRA).
5. Strengthening the mandatory **registration of public lands** by government agencies in order to have a complete mapping and registry of public lands (esp. indigenous lands).

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Responsible Land Governance: Towards an Evidence Based Approach

ANNUAL WORLD BANK CONFERENCE ON LAND AND POVERTY
WASHINGTON DC, MARCH 20-24, 2017



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