

# INSTITUTIONALIZATION OF PARTICIPATION IN ENVIRONMENTAL PUBLIC POLICIES: A STUDY ON THE REGULATION OF ENVIRONMENTAL PROTECTION ZONE 9 IN NATAL, RN

*Institucionalização da participação em políticas públicas ambientais: estudo sobre a regulamentação da Zona de Proteção Ambiental 9 em Natal-RN*

*Institucionalización de la participación en políticas públicas ambientales: Estudio sobre la regulación de la Zona De Protección Ambiental 9 en Natal-RN*



**Ana Celecina Lucena da COSTA** – Instituto Federal de Educação, Ciência e Tecnologia da Paraíba (IFPB); ORCID ID: <https://orcid.org/0000-0002-7985-1996>  
URL: <http://lattes.cnpq.br/4712908555683418>  
EMAIL: [anaceluc@gmail.com](mailto:anaceluc@gmail.com)

**Raquel Franco de SOUZA** – Universidade Federal do Rio Grande do Norte (UFRN)  
ORCID ID: <https://orcid.org/0000-0001-8818-0605>  
URL: <http://lattes.cnpq.br/5181465668193577>  
EMAIL: [raquel.franco@ufrn.br](mailto:raquel.franco@ufrn.br)

**Raquel Maria da Costa SILVEIRA** – Universidade Federal do Rio Grande do Norte (UFRN); ORCID ID: <https://orcid.org/0000-0003-4560-1451>  
URL: <http://lattes.cnpq.br/8919649299739496>  
EMAIL: [raquelmcsilveira@hotmail.com](mailto:raquelmcsilveira@hotmail.com)

**Patricia Aguiar de OLIVEIRA** – Faculdade de Enfermagem e Medicina Nova Esperança (FACENE/FAMENE); ORCID ID: <https://orcid.org/0000-0003-1471-8091>  
URL: <http://lattes.cnpq.br/6861956018638962>  
EMAIL: [profvvet.patricia@gmail.com](mailto:profvvet.patricia@gmail.com)

Article History

Received: 14 June, 2023

Accepted: 19 September, 2023

Published: 06 November, 2023

## ABSTRACT

Environmental Protection Zone 9, established in the municipality of Natal, the capital of the State of Rio Grande do Norte, possesses natural, socio-economic, and territorial peculiarities that indicate the need for its regulation to define its territorial boundaries and zoning. To achieve this, segments of civil society and the government participated in the municipal management councils. In light of these aspects, this study aimed to analyze the influence of institutionalized participation on the geographical delineation and zoning of Environmental Protection Zone 9 in the Northern Administrative Region of Natal. The aim of this research was to present the administrative process of integrated regulation of urban alterations in Environmental Protection Zone 9. Initially, the scope and concepts of institutionalizing participation in public policies, regionalization, and zoning, were addressed, drawn from specialized literature. The article constitutes an empirical study with exploratory and qualitative approaches. Maps with territorial boundaries and zoning were produced, taking into account the procedural stages of the regulation of the Zone, which occurred between 2014 and 2019. The results of this research indicate the low influence of civil society during institutionalized participation in the regionalization of

that area, as defined through zoning, leading to, among other factors, the weakening of the ecosystem and an increase in land conflicts in the region.

**Keywords:** Region; Zoning; Social participation; Northern Administrative Region.

## RESUMO

A Zona de Proteção Ambiental 9, estabelecida no município do Natal, capital do Estado do Rio Grande do Norte, possui particularidades naturais, socioeconômicas e territoriais que indicam a necessidade de sua regulamentação para a definição dos seus limites territoriais e do zoneamento. Para tanto, houve a participação dos segmentos da sociedade civil e do governo nos conselhos gestores municipais. Diante destes aspectos, procurou-se analisar a influência da participação institucionalizada nos delineamentos geográfico e do zoneamento da Zona Proteção Ambiental 9, na Região Administrativa Norte do Natal. Essa pesquisa teve como objetivo apresentar o trâmite do processo administrativo de regulamentação integrado às alterações urbanísticas da Zona de Proteção Ambiental 9. Primeiramente, foram abordados os alcances e conceitos sobre institucionalização da participação em políticas públicas, regionalização e zoneamento, extraídos da literatura especializada. O artigo constitui um estudo empírico, com abordagens exploratória e qualitativa. Os mapas com as delimitações territoriais e o zoneamento foram produzidos considerando as etapas do trâmite processual da regulamentação da Zona, que ocorreu entre os anos de 2014 e 2019. Os resultados nessa pesquisa constataam a baixa influência da sociedade civil durante a participação institucionalizada para a regionalização daquela área, definida através do zoneamento, causando, entre outros fatores, a fragilização do ecossistema e o aumento dos conflitos fundiários na região.

**Palavras-chave:** Região; Zoneamento; Participação social; Região Administrativa Norte.

## RESUMEN

La Zona de Protección Ambiental 9, establecida en el municipio de Natal, capital del Estado de Rio Grande do Norte, tiene particularidades naturales, socioeconómicas y territoriales que indican la necesidad de su regulación para la definición de sus límites territoriales y zonificación. Para ello, se contó con la participación de segmentos de la sociedad civil y del gobierno en los consejos de gestión municipales. Dados estos aspectos, se buscó analizar la influencia de la participación institucionalizada en las delineaciones geográficas y la zonificación de la Zona de Protección Ambiental 9, en la Región Administrativa Norte de Natal. Esta investigación tuvo como objetivo presentar el proceso administrativo de regulación integrado a los cambios urbanos de la Zona de Protección Ambiental 9. Para ello, se abordaron los alcances y conceptos sobre institucionalización de la participación en políticas públicas, regionalización y zonificación, extraídos de la literatura especializada. El artículo es un estudio empírico, con enfoques exploratorios y cualitativos. Los mapas con las delimitaciones territoriales y la zonificación se elaboraron considerando las etapas del proceso de regulación de la Zona, que ocurrió entre los años 2014 y 2019. Los resultados de esta investigación muestran la poca influencia de la sociedad civil durante la participación institucionalizada para la regionalización de esa área, definida a través de la zonificación, causando, entre otros factores, el debilitamiento del ecosistema y el aumento de los conflictos de tierras en la región.

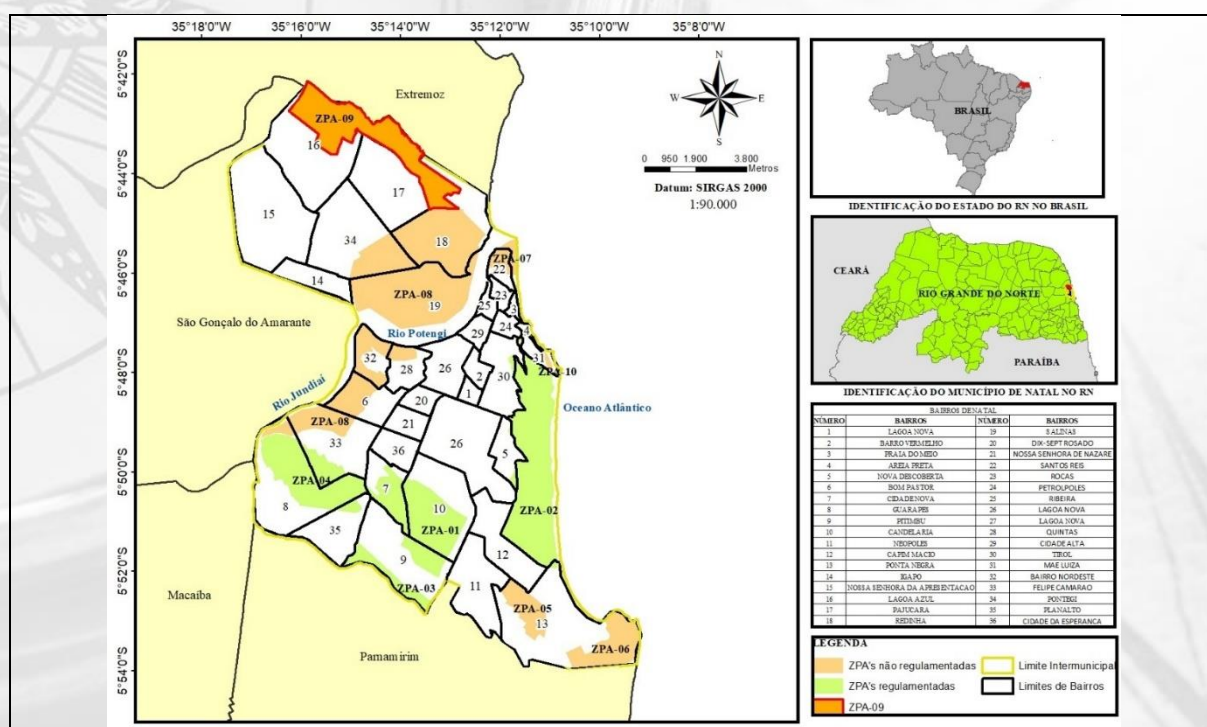
**Palabras clave:** Región; Zonificación; Participación social; Región Administrativa Norte.

## 1 INTRODUCTION

Since the Federal Constitution (BRAZIL, 1988), municipalities have had the ability to establish diverse linkages and disconnections in their regions, aiming to promote territorial planning with urban land use and occupation planning, harmonized with environmental protection. To accomplish this, ecological-economic zoning (EEZ) was instituted in 2002, to be defined through the participation of civil society, governmental, and economic sectors in institutionalized spaces, such as public hearings, councils, etc. (BRAZIL, 2002).

However, in addition to the challenges in the participation of these segments, another condition is observed, related to zoning delineations in areas with overlapping pre-existing regionalizations in the territory, directed towards various regional arrangements and diverse functionalities that mutually collide. This is the case in Environmental Protection Zone 9 (EPZ 9) (in Portuguese: *Zona de Proteção Ambiental 9 (ZPA 9)*<sup>1</sup>), the subject of this article's study (Figure 01). This is located in parts of the Lagoa Azul neighborhoods, *Pajuçara*, and *Redinha*, in the Northern Administrative Region (In Portuguese: *Região Administrativa Norte (RAN)*) of Natal.

**Figure 01 – Study area (EPZ 9) in the context of Natal - Rio Grande do Norte**



**Source:** Compiled by the authors (2023), based on Natal (2016) and Natal (2022).

<sup>1</sup> The words in italic mean that the original language – Portuguese – was chosen to remain in the original text. It is an option by the original authors. Successive translations will not appear.

This is the only EPZ with territorial overlap with sections of the *Jenipabu* Environmental Protection Area (APAJ) (in Portuguese: *Área de Proteção Ambiental de Jenipabu (APAJ)*), located in the municipality of *Extremoz*, as well as within the municipality itself, with Environmental Protection Zone 8 (EPZ 8) and the *África* community, both located in the *Redinha* neighborhood (UFRN; FUNPEC; MP-RN, 2012). Furthermore, another land conflict in the region was evident, stemming from the implementation of *Moema Tinoco* Avenue in 2014 (Furukava, 2018).

The implementation of Environmental Protection Zone 9 occurred through regulation, as part of the administrative process that took place between 2014 and 2019. After participation and deliberation, conducted in both public hearings and within the scope of 4 (four) municipal councils (NATAL, 2014), the bill regulating EPZ 9 was defined and sent to the Natal Municipal Council (NMC), where it is currently under consideration (CÂMARA MUNICIPAL DE NATAL, 2022).

Based on these aspects, this article aims to present the administrative process flow of regulation integrated with the urban changes in Environmental Protection Zone 9.

## 2 METHODOLOGY

This article encompasses an integrated contextual analysis (Richardson, 2012; Cellard, 2014) of the institutional process flow for the regulation of EPZ 9, along with spatiotemporal changes in the region's zoning (land uses and occupations, and respective zones). The spatiotemporal scope covers the period from the initiation of the regulation process in 2014 to its completion in 2019.

For the theoretical framework (institutionalization of social participation in public policies, zoning, and regionalization) and data collection, both bibliographic and documentary research methods were employed. As for the documentation, we used Civil Inquiry n.º. 026, from the Public Prosecutor's Office of the State of Rio Grande do Norte (MP/RN) (2011) ((in Portuguese: *Ministério Público do Rio Grande do Norte (MP/RN)*) and the Administrative Process (in Portuguese: *Processo Administrativo ((PA))*) or the Regulation of EPZ 9, n.º 57829/2014-08 (NATAL, 2014), were used as sources.

The urbanistic modifications are presented in four maps, organized according to the stages of the EPZ 9 regulation process. Two of these graphical representations were created at scales of 1:90,000 and 1:25,000. Geotechnology utilizing ArcGIS software, version Desktop 10.6, was employed for this purpose. These maps are based on

cartographic data from the *Instituto Brasileiro de Geografia e Estatística* (IBGE) (2020) and the *Instituto de Desenvolvimento Sustentável e Meio Ambiente* (IDEMA) (2006), as well as geographical coordinates and polygons derived from Natal (2014; 2016; 2022).

### 3 THEORETICAL FOUNDATION

Below, two theoretical topics on the institutionalization of social participation in public policies, zoning, and regionalization are presented.

#### 3.1 Institutionalization of social participation in Public Policies

With the advent of the 1988 Constitution and the Statute of Cities in 2001 (BRASIL, 1988; 2001), democratic participation was stipulated. The institutionalization of this participation takes place within Participatory Institutions (PIs), understood as "ways in which citizens or civil society associations can participate in the political decision-making process" (Avritzer, 2008, p. 45). Examples of IPs in Brazil include Public Policy Management Councils (Almeida, 2018, p. 11), master plans, committees, forums, consultations, and public hearings (BRASIL, 2001).

However, starting in 2013, there was a "break in the left's monopoly on participation, which began to be contested by the conservative middle class, who effectively used new media and social networks" (Gaspardo, 2018, p. 72). In other words, there was a transition moment at the national level, with a steep increase in society's protests in the streets, used as a mechanism to demand the implementation of public policies from institutions, and no longer through institutionalized participation spaces (Avritzer, 2018).

These protests continued until 2016 when President Dilma Rousseff was impeached through a political-legislative impeachment process (Tatagiba; Galvão, 2018). Between 2016 and 2018, the dismantling of institutionalized channels of social participation began (Morais; Silva; Silva, 2021), reaching its peak during Jair Bolsonaro's government in 2019. The dominance of authoritarian neoliberalism (Paredes; Tatagiba and Gallegos, 2022) has been affecting institutionalized participation channels, it has been affecting institutionalized channels of participation, thereby weakening Brazilian democracy (Avritzer, 2018).

In light of the above, the institutionalization of participation in public policies in Brazil depends on the contexts in which they are embedded. The "alternation between democratic and authoritarian regimes" (Bizarro; Coppedge, 2017, p. 11) leads to "democratic periods" and "democratic regression" (Avritzer, 2018, p. 278) in how participation predominantly occurs.

### 3.2 Regionalization and zoning: Conceptual differentiations

Region and regionalization are characterized by their polysemic conceptualization (Marcon, 2009; Duarte; Contel; Balbim, 2013), depending on the era, the current of geographical thought, and the branch of Geography<sup>2</sup>. Additionally, these concepts have been influenced by successive phases of capitalism.

In Geography, regionalization originated from the concept of natural region, followed by geographical region (Marcon, 2009) and homogeneous regions (Balbim; Contel, 2013). Finally, in Critical Geography, the region is defined by adding the political dimension (Corrêa, 1989). From this, the planning region emerged, a territorial unit over which the State exerts action and control, using joint discourses of preservation and development, disregarding the specificities and social agents present in the territory (Damo, 2014).

Considering the authors mentioned above, as well as Haesbaert (2010; 2020), a region is seen as a homogeneous area, defined differently according to natural and human (historical, political-administrative, socio-economic, and/or technical) criteria. Regionalization is defined as both regional division (Pereira, 2000; Santos, 2006) and internal and/or external differentiation of areas on the space-time scale according to specific criteria (Matteo et al., 2013; Balbim; Contel, 2013; Haesbaert, 2020), and it is oriented towards serving specific functionalities (Talaska, 2011). From an environmental perspective, regionalization is established through zoning. In this sense, the ZEE (BRASIL, 2002) defines zone as a synonym for region (Matteo et al., 2013), and it is conceptually defined in its article 2 as:

An instrument for organizing territory that must be strictly followed in the implementation of public and private plans, works, and activities; it establishes measures and standards for environmental protection, aimed at ensuring environmental quality, water and soil resources, and biodiversity conservation, guaranteeing sustainable development and improving living conditions for the population (BRASIL, 2002).

Thus, EZZ incorporates sustainability (ecological, economic, and social), allowing social segments to participate in the formulation, execution, and monitoring of public policies. These involve the formulation and implementation of plans and programs (Silva; Rauli, 2009), covering norms and actions based on pre-established guidelines.

To meet these premises, the ZEE (Zoning and Environmental Licensing) must

---

<sup>2</sup> These comprise the epistemological foundations (Barbosa; Paz; Dantas, 2017).

consider the specificities of each zone (Cruz, 2018), classifying and demarcating them in order to prohibit or tolerate certain uses and occupancy, either partially or completely (Moreira Neto, 1977; Fiorillo, 2013). Municipalities determine the configurations and nomenclatures of these zones, taking into account local peculiarities. For example, the authorities in Natal established 10 Environmental Protection Zones (ZPAs) since the Natal Master Plan of 1994, subsequently delineated in the Master Plans of 2007 and 2022 (NATAL, 1994; 2007; 2022). Therefore, a ZPA is an "area in which the characteristics of the physical environment restrict the use and occupancy, aiming at the protection, maintenance, and restoration of environmental, ecological, landscape, historical, archaeological, touristic, cultural, architectural, and scientific aspects" (Moura et al., 2013, p. 222).

Similarly to regionalization, zoning represents a technical and administrative instrument (Antunes, 2010; Peres; Chiquito, 2012) used for specific purposes and criteria (Cruz, 2018). However, regionalization involves a broader territorial division, established differently by federative entities, spheres of action, public and private sectors, and geographical scales, considering certain criteria and objectives. In the context of ecological purposes, it reinforces the understanding that zoning constitutes a form of regionalization.

Regionalization and zoning have produced a mix of instruments established at different levels of governance that are not integrated with each other. As a result, both instruments lack integration and hinder the proper establishment of urban-environmental public policies. These aspects are addressed in Feitosa and Dantas (2017) and Barbosa, Paz, and Dantas (2017), which conclude that the existence of multiple regionalizations affecting the same region leads to conflicts and renders planning inefficient.

## **4 RESULTS AND DISCUSSION**

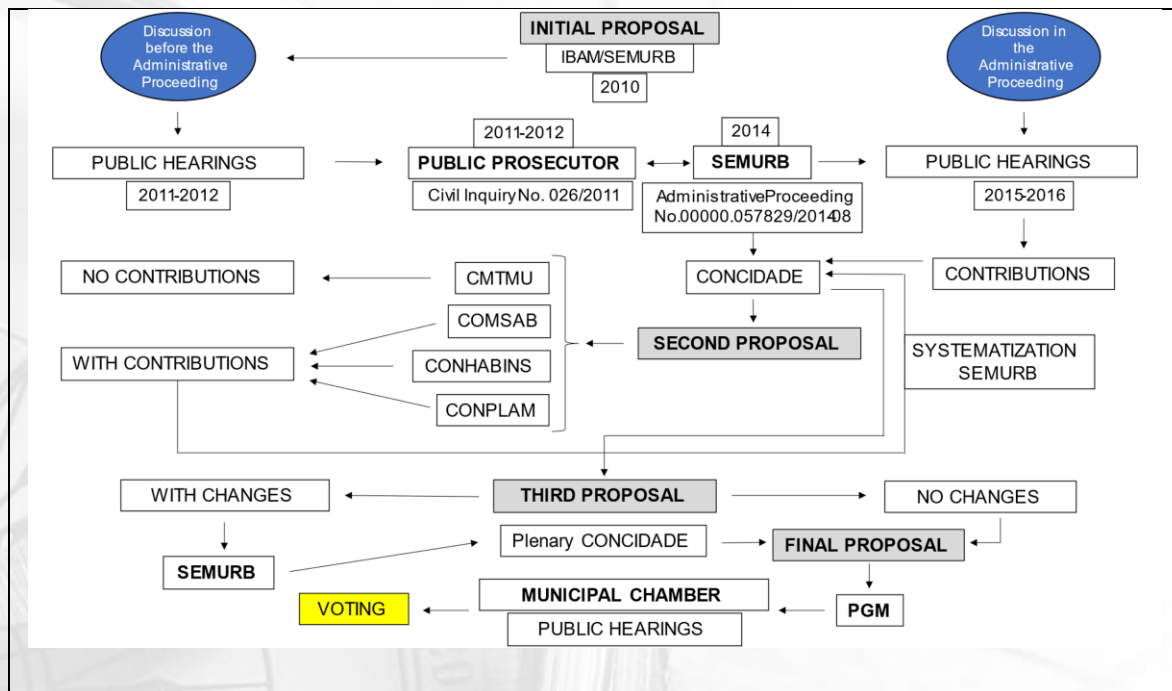
Having presented the theoretical foundation, the next section introduces the results and discussions concerning the procedural development of the ZPA-9 regulation and the urbanistic changes that occurred between the years 2014 and 2022.

### **4.1 Procedural Flow of the Regulation of Environmental Protection Zone 9**

The ZPA-9 was established in the 2007 Master Plan. However, Administrative Process No. 57829/2014-08, which regulated ZPA-09, was initiated seven years after its establishment (NATAL, 2007; 2014), which provided the basis for the Secretariat of Environment and Urbanism of the Municipality of Natal (in Portuguese: *Secretaria de Meio Ambiente e Urbanismo do Município de Natal (SEMURB)*) to draft the Complementary Law

n.º 16/2008, aimed at regulating Environmental Protection Zone 9. The procedural stages of the regulation of EPZ 9, both before and after the initiation of the administrative process, are detailed in figure 02.

**Figure 02 – Procedural flow of the Administrative Process for the regulation of EPZs**



**Source:** Compiled by the authors, based on Natal (2014) and Natal (2015a).

**Acronym Notes:** Brazilian Institute of Municipal Administration (in Portuguese: *Instituto Brasileiro de Administração Municipal (IBAM)*); Municipal Council of Traffic and Urban Transportation (in Portuguese: *Conselho Municipal de Trânsito e Transportes Urbanos (CMTMU)*); Municipal Council of Basic Sanitation (in Portuguese: *Conselho Municipal de Saneamento Básico (COMSAB)*); Municipal Council of Social Interest Housing (in Portuguese: *Conselho Municipal de Habitação de Interesse Social (CONHABINS)*); Municipal Council of Urban Planning and Environment (in Portuguese: *Conselho Municipal de Planejamento Urbano e Meio Ambiente (CONPLAM)*); Natal City Council (in Portuguese: *Conselho da Cidade do Natal (CONCIDADE)*); Municipal Attorney General's Office of Natal (in Portuguese: *Procuradoria Geral do Município (PGM)*).

The studies, reports, and the review of the EPZ 9 regulation project were conducted by the IBAM and SEMURB in march 2010 (Furukava, 2018). From the initial proposal for regulation outlined in march 2010 (Figure 02), public hearings were held on 01/06/2011, 21/03/2012, and 28/03/2012, and their contributions were summarized in table 01.



**Table 01 – Contributions made in public hearings (2011-2012)**

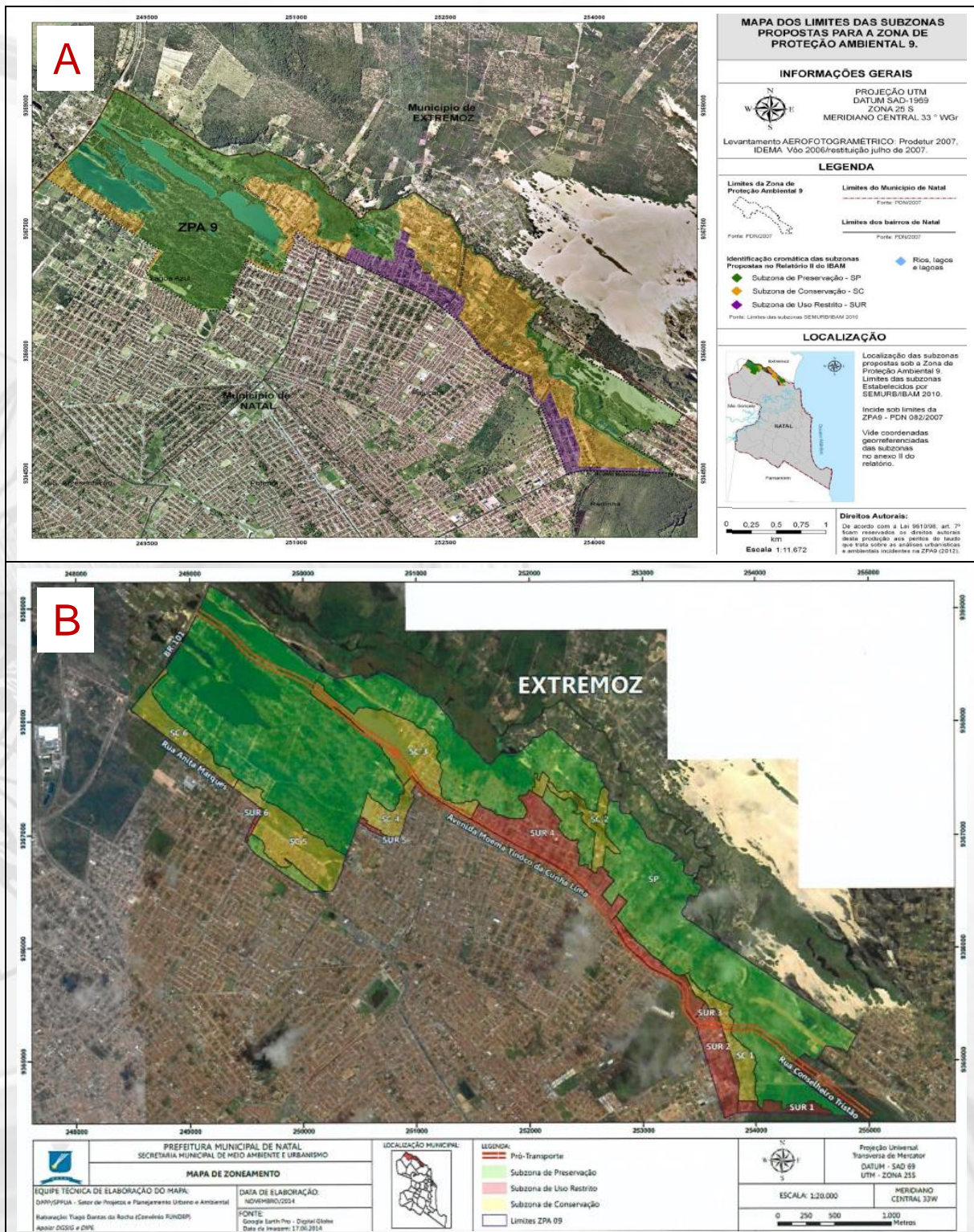
Sector	Contributions
Technical Staff of the Municipality of Natal	Resumption of the Pro-Transport project to duplicate the <i>Igapó</i> Bridge and implement a third bridge over the <i>Potengi</i> River, improving the road system.
Lawyer	Implementation of affordable housing.
Community from the <i>Lagoa Azul</i> neighborhood	Installation of a park between the dunes and the <i>Lagoas Azul Dendê</i> and <i>Gramoré</i> .
SINDUSCON	Amendment to the regulation proposal, changing the term from 'fluvial-marine' to 'fluvial-lacustrine'. Implementation of the <i>Minha Casa, Minha Vida</i> program in areas suitable for occupation without agricultural projects.
MP/RN	Compliance with federal, state, and municipal legislation applicable to EPZ 9. Changes in the boundaries of EPZ 9 and in the regulation bill to avoid overlaps with the <i>Jenipabu</i> Environmental Preservation Area (APA) in <i>Extremoz</i> . Consideration and delineation of settlements in the Special Area of Social Interest for possible inclusion. Limitation of height in the Conservation Subzone and Restricted Use Subzone. Revision of minimum lot size, occupancy rate, and permeability in the SUR. Amendments to provisions of the regulation bill.

**Source:** Compiled by the authors, based on Natal (2014).

**Notes:** Conservation Subzone (in Portuguese: *Subzona de Conservação (SC)*); Construction Industry Union (in Portuguese: *Sindicato da Indústria da Construção Civil (SINDUSCON)*); Restricted Use Subzone (in Portuguese: *Subzona de Uso Restrito (SUR)*); Special Area of Social Interest (in Portuguese: *Área Especial de Interesse Social (AEIS)*).

After these official public acts, contributions were made by various sectors, including the Lagoa Azul neighborhood community, technical experts from the Natal City Hall, lawyers, and the Construction Industry Syndicate (SINDUSCON) (NATAL, 2014). In 2012, the Public Prosecutor's Office of Rio Grande do Norte (MP-RN) also presented contributions in a forensic report, prepared by the Federal University of Rio Grande do Norte and the North Rio Grande Research and Culture Foundation, regarding the legal omissions in the bill and the limits of the subzones established for ZPA-9. This report was issued within the scope of Civil Inquiry No. 026 (MP/RN, 2011), which was initiated "to monitor and assess the regularity of the ZPA-9 regulation process" (UFRN; FUNPEC; MP-RN, 2012, p. 3).

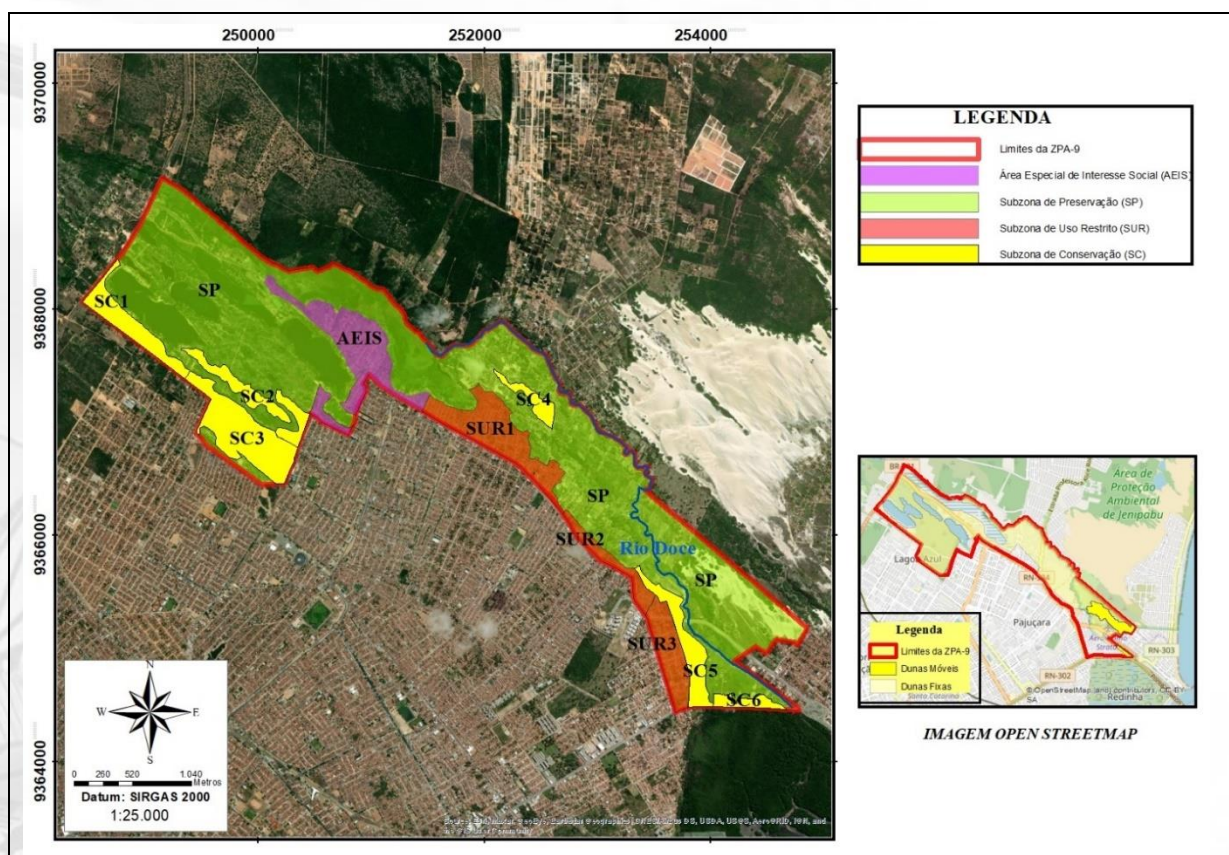
Figure 03 – Initial proposals for EPZ 9, 2010 (A) and jan./2015 (B)



Source: Natal (2014).

Notes: Preservation Subzone (in Portuguese: *Subzona de Preservação (SP)*).

**Figure 04 – Changes in the boundaries and zoning of EPZ 9, nov./2015**



**Source:** Compiled by the authors, based on Natal (2014).

As a result of the new proposal, public hearings were held on 16/12/2015, 31/03, and 01/06/2016. The first hearing did not take place due to a lack of *quorum*<sup>3</sup>, the last two took place'. table 02 summarizes the number of sectors that participated and acted in these events.

**Table 02 – Participation and actions in public hearings (2015-2016)**

Public Hearing	Participating Sectors	Acting Sectors	Total
31/03/2016	SEMURB (14); PGM; IDEMA; MP/RN; CAU-RN; lawyer; Community Councils: <i>Nova República, Pajuçara II, and Gramoré</i> ; <i>Aliança</i> Community; <i>Caiana</i> Housing Development; SINDUSCON; <i>Master Mais</i> Company; <i>Criative</i> ; <i>O Clarim</i> Newspaper; retired individual (1); COSERN; CMN; COVISA;	PGM; IDEMA; CAU-RN; lawyer; COVISA; Community Councils: <i>Pajuçara II and Gramoré</i> ; UFRN; <i>O Clarim</i>	54

<sup>3</sup> Minimum number of board members required to hold a board meeting.

Public Hearing	Participating Sectors	Acting Sectors	Total
01/06/2016	property owners in the region (2); UFRN; health professionals from NASF/SMS; PROMONATAL Real Estate (4); NI (5).  SEMURB (16); IBAMA; Brazilian Navy; Legislative Assembly of <i>Rio Grande do Norte</i> ; UNI-RN; CAU-RN; COVISA; SEMSUP; SEMARH; CPRN; NI Community Council; <i>Pajuçara</i> II Community Council; <i>Caiana</i> Housing Development; FIERN; <i>O Clarim</i> , <i>O Público</i> , and <i>Tribuna do Norte</i> Newspapers; <i>Campo Aviação</i> representative (1); PGM; <i>Redinha</i> Community Council; lawyers; retired individuals (2); NASF/SMS (3); UFRN; professionals; local property owners (4); MP/RN (7); Company representatives (8); NI (9).	Newspaper (1); PROMONATAL (3).  PGM; MP/RN; CAU/RN; UFRN; lawyers; O <i>Público</i> Newspaper (1); property owners (3).	80

**Source:** Compiled by the authors, based on Natal (2014).

**Notes:** Port Captaincy of *Rio Grande do Norte* (In Portuguese: *Capitania dos Portos do Rio Grande do Norte (CPRN)*); University Center of *Rio Grande do Norte* (In Portuguese: *Centro Universitário do Rio Grande do Norte (UNI-RN)*); *Rio Grande do Norte* Power Company (In Portuguese: *Companhia Energética do Rio Grande do Norte (COSERN)*); Regional Council of Engineering and Agronomy of *Rio Grande do Norte* (In Portuguese: *Conselho Regional de Engenharia e Agronomia do Rio Grande do Norte (CREA/RN)*); Coordination of Surveillance and Health (In Portuguese: *Coordenadoria de Vigilância e Saúde (COVISA)*); Federation of Industries of the State of *Rio Grande do Norte* (In Portuguese: *Federação das Indústrias do Estado do Rio Grande do Norte (FIERN)*); Brazilian Institute of Environment and Renewable Natural Resources (In Portuguese: *Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA)*); Not identified (NI); Family Health Support Center (In Portuguese: *Núcleo de Apoio a Saúde da Família (NASF/SMS)*); Brazilian Bar Association - *Rio Grande do Norte* Sectional (In Portuguese: *Ordem dos Advogados do Brasil (OAB/RN)*); Municipal Department of Public Health (In Portuguese: *Secretaria de Saúde Pública (SEMSUP)*); State Department of the Environment and Water Resources (In Portuguese: *Secretaria do Meio Ambiente e dos Recursos Hídricos (SEMARH)*); *Potiguar* University (In Portuguese: *Universidade Potiguar (UNP)*).

In the hearing held on 31/03/2016, there were specific interventions with questions, critiques, and suggestions regarding various areas of EPZ 9. Additionally, the majority of participants decided to grant a deadline for submitting contributions to the regulation project (NATAL, 2014).

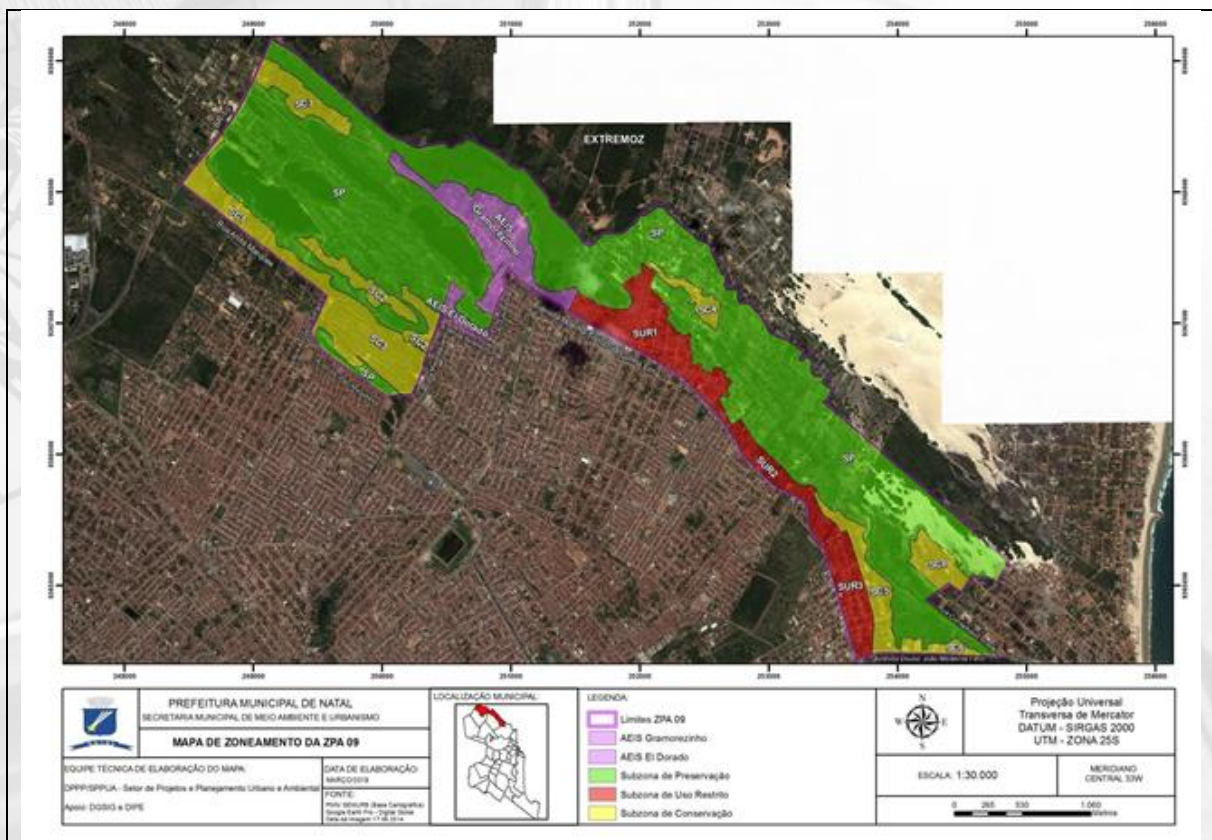
Subsequently, 20 (twenty) contributions from various sectors were presented, some of which also participated in the second public hearing. In summary, they suggest changes or clarifications to provisions in the 11/2015 bill. Simultaneously, proposals were made for zoning, including the expansion of Conservation Subzones 1 and 2 (CS 1 and 2) and the conversion of the Preservation Subzone into a Restricted Use Subzone to the north of ZPA-9, as these are plateau areas. There was also an increase in the occupancy rate in CS 1 and 2, a review of measurements along the shores of the ZPA-9 lakes, reclassification of

CS 2 and 3 to SP, and the use of identical utilization on properties located in more than one Subzone, not exceeding a development coefficient of 0.6 and an occupancy rate of 40%, and an expansion of SUR-2 or its conversion into SUR-3 (NATAL, 2014).

The changes in the terms were accepted in a new review. Additionally, four provisions were added between articles 17 and 18, which concern urban regulations, primarily in the Special Use Zones (SURs). After another modification of the project and ZPA-9 zoning in may 2016, the final public hearing took place in june 2016 (Table 02) (NATAL, 2016). Following this, two contributions were submitted by property owners and companies, and one from the MP/RN. In summary, they suggest alterations to urban regulations, such as occupancy rates and utilization coefficients, as well as the conversion of CS 2, 3, and 7 into SP (NATAL, 2014).

In 2016, SEMURB consolidated the contributions, once again revising the regulation bill and the zoning of EPZ 9, as detailed in figure 05.

**Figure 05 – Boundaries and zoning of EPZ 9 before discussion in the Councils**



Source: Natal (2016).

On 07/14/2016, the Municipal Councils were notified to submit contributions. CONPLAM deliberated on the regulation proposal at the 213th and 214th Extraordinary Meetings, held on 04/06 and 04/11/2017, respectively (NATAL, 2014). COMSAB deliberated at the 60th Extraordinary Meeting and the 115th Regular Meeting, held on 08/10 and 10/19/2016, respectively (NATAL, 2014). CONHABINS deliberated at the 33rd, 34th, and 36th Regular Meetings, held on 08/18, 09/18/2017, and 03/26/2018, respectively (NATAL, 2023b). CONPLAM and COMSAB prepared their assessments and reports on 03/28/2017 and 10/13/2016 (NATAL, 2014). CONHABINS concluded on 09/18/2017 (NATAL, 2017). However, they were only forwarded to CONCIDADE in 2018.

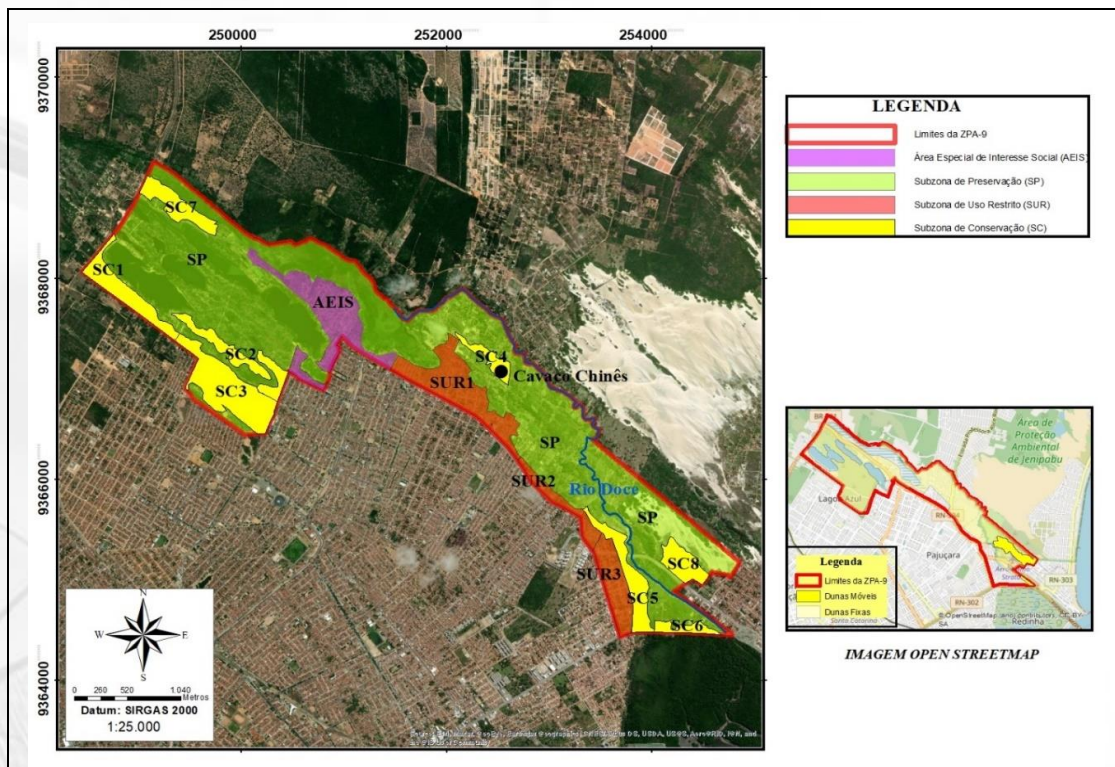
SEMURB systematized the assessments of the councils and submitted them to the City Council. In this council, deliberations on the regulation and zoning project of EPZ 9 took place at the Extraordinary Meetings on 05/30 and 10/10/2018, and 02/12/2019 (NATAL, 2023a). The report and opinion were sent to SEMURB and became part of the documentation for the revision of the 2007 PDN, which began on 06/01/2017 (NATAL, 2023c). The process of regulating ZPA-9 was concluded in 2019 (NATAL, 2014). The council proceedings, therefore, encompassed the longest period of the EPZ 9 regulation process.

The revision of the 2022 PDN was conducted through public hearings, working group meetings, and seminars, held in person between 06/2017 and 02/2020, remotely between 03/2020 and 01/2021, and again in person between 02 and 09/2021 when it was submitted to the Natal Municipal Council. The current Natal PDN (2022) was promulgated on 03/07/2022 and contains the systematization of the EPZ 9 regulation proposal (Figure 06).

Following the promulgation of the current PDN, the Municipal Executive Power submitted the EPZ 9 regulation project to the Natal Municipal Council on 04/19/2022<sup>4</sup>, which is still under consideration. Next, we present an overview of the urban changes in Environmental Protection Zone 9 between 2014 and 2019.

<sup>4</sup> The Legislative Process (Supplementary Law n.º 4/2022) can be followed at <https://sapl.natal.rn.leg.br/materia/2027>.

**Figure 06 – Final proposal after completion of EPZ 9 Regulation Process**



**Source:** Compiled by the authors (2023), based on Natal Municipal Council (2022).

#### 4.2 Urban changes in the Environmental Protection Zone 9 during the Regulation of Environmental Protection Zone 9

When comparing the Complementary Law n.º 16/2008 and the respective initial zoning proposal from January 2015, it is evident that several provisions were altered, added, or removed. Notably, there is a shift from defining the perimeter of the area with polygonal lines to specifying vertex descriptions. Additionally, there are modifications in the quantities and boundaries of subzones (NATAL, 2015b).

In the original zoning project (Figure 03A), there were nine subzones, comprising four SCs, three SPs, and two SURs. By 2015, the number of subzones had increased to thirteen, including six SCs, one SP, and six SURs. Analyzing the zoning changes in EPZ 9 (Figure 03), a substantial decrease in SCs is evident, with the central region of the area mainly converted into SP (Figure 03B). Especially in the central area of the region, a conversion of that area into SP (Figure 03B) took place. However, the SURs predominantly increased in the neighborhoods of *Pajuçara* and *Redinha*. Thus, there was a fragmentation

in the region, significantly expanding the areas of occupation compared to the initial proposal.

In the 2015 zoning project, there was permission for cultivation along the *Rio Doce* in the SP. The requirement to observe the elevation of 13 meters above sea level in lagoons and their surroundings was removed in this area and replaced with a generic term, only encompassing "coastal plateaus known to be covered by typical *restinga* vegetation" (NATAL, 2014, p. 400). Furthermore, the mentioned elevation was removed in the conservation subzones as well. It is important to note that the revision of the original project did not consider the suggestion proposed in the report by the Public Prosecutor's Office of *Rio Grande do Norte* (Table 01), which recommended specifying the regions where this elevation should be observed. This oversight favored land use and occupation permissions in conservation and preservation areas (UFRN; FUNPEC; MP-RN, 2012).

Moreover, the 2015 amendments allow for occupancy in farms and rural properties in two SCs, as well as the implementation of sustainable agricultural activities in the SP. Previously, such uses were only permitted in conservation subzones.

It is also noteworthy that the 2015 revision established AEIS in SC-3, already allowed in the original project, in accordance with the proposal of the MP/RN. Similarly, it considered the suggestion from the *Lagoa Azul* neighborhood community by designating the Municipal Park of *Lagoa Azul* as a Conservation Unit (In Portuguese: *Unidade de Conservação (UC)*). However, when opting to adopt the contributions of the lawyer and the representative of SINDUSCON, the 01/2015 revision allowed for the implementation of social interest housing in Conservation Subzones 04 and 05, as well as in Restricted Use Subzones 02, 03, and 05 (Table 01). Meaning, in addition to disregarding the aforementioned elevation in Conservation and Preservation Subzones, it also did not establish specific provisions to limit the height in SC and SUR, as well as to revise the minimum lot size, occupancy rate, and permeability of the Restricted Use Subzone.

In the 11/2015 revision (Figure 04), new changes occurred in the environmental subzoning and land uses within ZPA-9. Consequently, it now comprises 6 (six) Conservation Subzones, one Preservation Subzone, 3 (three) Restricted Use Subzones, and 2 (two) Special Areas, namely, the Special Areas of Social Interest *El Dorado* (AEIS *El Dorado*) and Food Security (AEIS *Gramorezinho*), as previously stipulated in the 2007 Master Plan but still pending regulation.

Analyzing the urban changes in the zoning of EPZ 9 (Figures 03B and 04), a subtle increase in Conservation and Preservation Subzones is noticeable. There was also a slight



decrease in the Restricted Use Subzones, mainly in parts of the *Pajuçara* and *Redinha* neighborhoods. Additionally, the SUR-5 from the January 2015 draft, located in the Lagoa Azul neighborhood, became part of AEIS *El Dorado*.

Furthermore, new criteria were established for the lakes and their surroundings, as well as the lands bordering the Rio Doce in the SP, which must observe a minimum strip of 30 (thirty) meters and 30 (thirty) to 50 (fifty) meters, considering the “edge of the regular riverbed”, respectively. Additionally, the SP encompasses “areas with “a slope greater than 45°” (forty-five) degrees, starting from the edge of the slope break” (NATAL, 2014, p. 607-8). Finally, it is important to note that the possibility of cultivation along the Rio Doce or sustainable agriculture activities in the Preservation Subzone was excluded, as well as occupation in farms and estates in the Conservation Subzones, which existed in the previous revision. These modifications stem from the enactment of the new Forest Code (BRASIL, 2012)..

The November 2015 proposal introduces AEIS concepts, detailing their boundaries and those of the Subzones. It is important to highlight that AEIS *El Dorado* was previously a precarious settlement in Restricted Use Subzone V of the January 2015 proposal.

In all SCs and SURs of the January 2015 draft, residential, commercial, and service uses were permitted, subject to the following utilization coefficients: SC-1, SC-2, SC-4, and SUR-1 (0.50); SC-3 and SC-6 (0.20); SC-5 (0.20-0.270); SUR-4 to 6 (0.80); and SUR-2 and 3 (0.80-1.20).

In the November 2015 proposal, residential or non-residential uses were allowed in SC-2, SC-4, and SC-6, up to a “maximum utilization coefficient of 0.2” (NATAL, 2014, p. 611). However, discrepancies can be observed in the urban prescription table of this project. Thus, SCs 1, 3, 4, and 6 tolerate a coefficient of 0.20; SC-5 has a utilization coefficient of 0.40; and SC-2 has a coefficient of 0.10. As for SURs, the utilization coefficients were 0.60. It’s also important to highlight that the utilization coefficients for Conservation and Restricted Use Subzones, as stipulated in the initial regulation project, were 0.20 and 0.80, respectively.

Comparatively, when analyzing the proposals from 2008, and 01 and 11/2015, it is clear that the second revision (Jan./2015) has the highest indices in all Subzones, followed by the 2008 preliminary project. Thus, despite various sectors’ suggestions during public hearings, the proposals, especially those from the MP/RN, aimed at conserving the environmental resources in EPZ 9 and controlling land uses and occupations in the region (Table 01).

Lastly, it is essential to highlight innovative provisions (articles 18, § 1st, h, and 20) found in the november 2015 proposal. These provisions addressed the establishment of a Linear Park along the *Rio Doce*, albeit without details regarding this intervention project. Additionally, they proposed the creation of the "EPZ 9 Management Council<sup>5</sup>, with an advisory and deliberative nature", to discuss, evaluate, and propose actions and policies in the region. This Council was intended to be "equitably composed" of the Municipal Planning and Environment Secretariat representative and representatives from "public entities and civil society" (NATAL, 2014, p. 614).

The altered project in may 2016 established a zoning plan containing the two previously mentioned AEIS, one SP, 7 (seven) CSs, and 3 (three) SURs (Article 4). The SP consists of areas where use and occupancy are prohibited. These areas are considered Permanent Preservation Areas (PPAs), including dunes and their respective stabilizing vegetation, the lagoons, and the *Rio Doce*, along with their adjacent strips, wetlands (marshes, for example), areas that house rare, endangered, or insufficiently known flora and fauna species that serve as sites for resting, shelter, or reproduction, and areas with slopes exceeding 45° (forty-five) degrees from the edge of the slope break.

The SC, on the other hand, restricts residential and productive activities, as it acts as a buffer zone between the APPs and the more densely populated surrounding areas. Finally, SUR comprises areas of consolidated occupation due to the presence of regular and irregular subdivisions, with the aim of minimizing negative environmental impacts.

The regulatory project also anticipates the creation of Conservation Units along the *Rio Doce* (NATAL, 2016). In the urban planning changes depicted in Figure 05, the creation of SC-7 in the northern part of EPZ 9 is noticeable, which contributed to the reduction of the SP. It is worth noting the increase in utilization coefficients for SCs 1 and 3, which went from 0.20 to 0.30, as well as the establishment of a utilization coefficient for SC-7, set at 0.10. In the other Subzones, the indices remained unchanged.

Regarding the EPZ 9 regulatory bill, consolidated after deliberations in the municipal councils of Natal (CONPLAM, COMSAB, CONHABINS, and CONCIDADE), in march 2019 (Figure 06), several changes occurred. Thus, there was another reduction in the SP (highlighted in green) in the southernmost part of the region, in the *Redinha* neighborhood, "adjacent to the *África* Community and the *Caiana* Subdivision" (NATAL, 2014, p. 1788),

---

<sup>5</sup> The Management Council was never established, with CONCIDADE, CONPLAM, COMSAB and CONHABINS acting jointly.

due to the establishment of SC-8. This Subzone can only be implemented after basic sanitation services become available.

The 8 SCs and 3 SURs, highlighted in yellow and red, respectively, maintained the urban parameters <sup>6</sup>of the previous project. Additionally, the creation of the Special Area of Social Interest *Cavaco Chinês* was notable, located in SC-4. However, this AEIS was not defined in the administrative process under analysis.

In conclusion, based on the data presented in subsections 4.1 and 4.2, it was possible to identify institutionalized participation in public hearings and municipal councils in Natal during the EPZ 9 regulatory process, especially in the initial participatory space. This aspect is evidenced by the quantity and diversity of sectors, the speech acts delivered at these public events, and subsequent contributions. However, there is little influence from civil society segments during the EPZ 9 regulatory process. Consequently, the governmental (Natal municipality) and economic (real estate and construction industry companies or entrepreneurs) segments prevailed in terms of presence and activity, including in subsequent contributions, ultimately impacting institutionalized participation.

## 5 FINAL CONSIDERATIONS

Initially, this article provided a contextualized overview of participation institutionalization in Brazil, which, with the enactment of the Constitution, can take various forms for various purposes. Subsequently, aspects of region, regionalization, and zoning were discussed from a geographical perspective.

The Environmental Protection Zones, including ZPA-9, represented a regionalization established based on an ecological-economic zoning that incorporated both natural and human criteria, particularly of a political and economic nature. In other words, it considered the concepts of natural region, geographical region, and planning region.

These criteria were used appropriately, enabling the participation of different segments at various times and in different spaces, which defined the macro-zoning within the process of regulating Environmental Protection Zone 9. However, a closer examination of the results of this article reveals that the regionalization established for the area indeed considered hegemonic actors, represented by the municipality of Natal and real estate and construction industry companies or entrepreneurs. Therefore, local territorial differentiation and participation processes constituted intentional instruments of power affecting the

---

<sup>6</sup> Building potential, minimum lot area, occupancy (Furukava, 2018) and permeabilization rates.

definitions of the regions within Environmental Protection Zone 9.

These aspects are highlighted when considering modifications in regulatory bills and micro-zoning within Environmental Protection Zone 9. Analyzing the results of this article, the prevalence of the municipality of Natal and companies in the real estate and construction sectors was observed in the regionalization established for the area. In light of this, the processes of territorial differentiation and local participation constituted intentional instruments of power that influenced the definitions of the regions in ZPA-9.

These aspects are evident when analyzing the modifications in the regulations and micro-zoning of ZPA-9. Consequently, there were no changes to the boundaries of that Zone. The alterations occurred in the demarcations of the Conservation, Preservation, and Restricted Use Subzones. These variations led to an increase in areas for use and occupancy in the region in several ways: through the expansion of urban parameters, especially between the initial proposal and the first revision (01/2015); by the addition of Special Areas of Social Interest (AEISs) and the promotion of economic activities, including agriculture, observed in all revisions; or even through the progressive reduction of the Preservation Subzone (SP). These factors weakened the ecosystem within ZPA-9.

Another relevant aspect is the observation of the increase in existing land conflicts in the area. In addition to the persistence of overlaps of ZPA-9 with other municipalities and/or conservation units, such as APAJ and ZPA-8, the lack of definition of the boundaries of the Chinês Cavaco AEIS was evident. The 2022 Master Plan defined the delimitation of this AEIS. However, it was vetoed, and currently, its definition falls under the responsibility of the Municipal Legislature. In other words, institutionalized participation in the ZPA-9 regulation process was not comprehensive.

However, the findings of this article warrant some reservations. The examination of the administrative process of regulating Environmental Protection Zone 9 does not necessarily lead to a conclusion about the effectiveness of social participation. In this sense, it was emphasized that the importance of this effectiveness should be examined from various perspectives to ascertain that the decisions made in the council indeed corresponded to a democratic process.

## REFERENCES

- ALMEIDA, C. A participação política nas democracias contemporâneas: mapeando o debate. In: MARTELLI, C. G.G.; JARDIM, M. C.; GIMENES, É. R. (Coords.). **Participação política e democracia no Brasil contemporâneo**. São Paulo: Cultura Acadêmica, 2018.
- ANTUNES, P. de B. **Direito ambiental**. 12. ed. Rio de Janeiro: Editora Lumen Juris, 2010.
- AVRITZER, L. Instituições Participativas e Desenho Institucional: Algumas Considerações sobre a Variação da Participação no Brasil Democrático. **Opinião Pública**. Campinas-SP, v. 14, n. 1, p. 43-64, 2008.
- AVRITZER, L. O pêndulo da democracia no Brasil: Uma análise da crise 2014-2018. **Novos Estudos CEBRAP**. São Paulo, v. 37, n. 2, p. 273-289, mai./ago. 2018. Disponível em: <<http://dx.doi.org/10.25091/>>. Acesso: 31 jan. 2023.
- BALBIM, R.; CONTEL, F. B. Região e regionalização: subsídios teóricos para o ordenamento territorial e o desenvolvimento brasileiro. In.: BOUERI, R.; COSTA, M. A. **Brasil em desenvolvimento 2013: estado, planejamento e políticas públicas**. Brasília: IPEA, 2013.
- BARBOSA, J. R. de A.; PAZ, D. T.; DANTAS, A. Regionalização e planejamento no Rio Grande do Norte. **Confins**. São Paulo, n. 32, 2017. Disponível em: <<https://journals.openedition.org/confins/12363>>. Acesso em: 31 jan. 2023.
- BARDDAL, F. M. E.; TORRES, R. L. Efetividade da participação cidadã nos conselhos municipais de Curitiba. **Urbe**. Revista Brasileira de Gestão Urbana. Curitiba, n. 12, p. 1-15, 2020.
- BIZARRO, F.; COPPEDGE, M. Variedades da democracia no Brasil. **Opinião Pública**, Campinas, v. 23, n. 1, p. 1-42, jan./abr. 2017.
- BRASIL. **Constituição da República Federativa do Brasil de 1988**. Disponível em: <[http://www.planalto.gov.br/ccivil\\_03/Constituicao/Constituicao.htm](http://www.planalto.gov.br/ccivil_03/Constituicao/Constituicao.htm)>. Acesso em: 08 fev. 2023.
- BRASIL. Decreto n.º 4.297, de 10 de julho de 2002. Disponível em: ... Acesso em: 08 fev. 2023.
- BRASIL. Lei n.º 10.257, de 10 de julho de 2001. Disponível em: [http://www.planalto.gov.br/ccivil\\_03/leis/leis\\_2001/l10257.htm](http://www.planalto.gov.br/ccivil_03/leis/leis_2001/l10257.htm). Acesso em: 10 nov. 2020.
- BRASIL. Lei n.º 12.651, de 25 de maio de 2012. Disponível em: [https://www.planalto.gov.br/ccivil\\_03/\\_ato2011-2014/2012/lei/L12651compilado.htm](https://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/L12651compilado.htm) Acesso em: 10 nov. 2020.
- CÂMARA MUNICIPAL DO NATAL. Projeto de Lei Complementar nº 4, de 2022. **Regulamenta o uso e a ocupação do solo, delimita as subzonas e estabelece as prescrições urbanísticas para a Zona de Proteção Ambiental 9 (ZPA 9), abrangendo**

**parte dos bairros de Lagoa Azul, Pajuçara e Redinha, Região Administrativa Norte do Município do Natal/RN e dá outras providências.**

Disponível em: <<https://sapl.natal.rn.leg.br/materia/20278>>. Acesso em: 10 mai. 2023.

CELLARD, A. A Análise Documental. In: POUPART, J. *et al.* **A pesquisa qualitativa.** Enfoques epistemológicos e metodológicos. Petrópolis: Vozes, 2014.

CORRÊA, R. L. **O espaço urbano.** São Paulo: Editora Ática, 1989.

CRUZ, R. A. da. **Ordenamento territorial e sustentabilidade socioambiental:** Estratégias integradas para o desenvolvimento do Município de Covalima – Timor-Leste. Tese (Doutorado em Desenvolvimento e Meio Ambiente). Fortaleza: UFC, 2018.

DAMO, M. R. S. **Os arranjos regionais do território:** O caso da espacialização multiescalar no Oeste Catarinense. Tese (Doutorado em Engenharia Civil). Florianópolis: UFSC, 2014.

DUARTE, L. S.; CONTEL, F. B.; BALBIM, R. Regionalização da saúde e ordenamento territorial: análises exploratórias de convergências. In.: BOUERI, R.; COSTA, M. A.. **Brasil em desenvolvimento 2013:** estado, planejamento e políticas públicas. Brasília: IPEA, 2013.

FEITOSA, L. da C.; DANTAS, A. Território e federação: a dimensão institucional da política regional da saúde no Rio Grande do Norte. **Confins**, São Paulo, v. 32, 2017. Disponível em: <<https://doi.org/10.4000/confins.12371>>. Acesso em 23 fev. 2023.

FIORILLO, C. A. P. **Curso de direito ambiental brasileiro.** 14. ed. São Paulo: Editora Saraiva, 2013.

FURUKAVA, C. **Zonas de proteção ambiental e projetos rodoviários:** pressões e transformações entre a Zona de Proteção Ambiental 9 e o projeto rodoviário da Av. Moema Tinoco da Cunha Lima, Natal/RN. 2018. 247 f. Tese (Doutorado em Arquitetura e Urbanismo) – Departamento de Arquitetura, Universidade Federal do Rio Grande do Norte, Natal, 2018.

GASPARDO, M. Democracia participativa e experimentalismo democrático em tempos sombrios. **Estudos avançados.** São Paulo, v. 32, n. 92, p. 65-88, jan./abr. 2018.

HAESBAERT, R. Região, regionalização e regionalidade: questões contemporâneas. **Antares.** Caxias do Sul, n. 3, jan./jun. 2010.

HAESBAERT, R. Regionalizações brasileiras: antigos legados e novos desafios. **Confins.** São Paulo, n. 44, 2020. Disponível em: <<https://doi.org/10.4000/confins.26401>>. Acesso em: 02 fev. 2023.

INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA. **Coleção de mapas municipais.** Rio de Janeiro: IBGE, 2020.

INSTITUTO DE DESENVOLVIMENTO SUSTENTÁVEL E MEIO AMBIENTE. **Recursos hídricos e reservatórios.** Natal: IDEMA, 2006.

MARCON, M. T. de R. A trajetória dos processos de regionalização em Santa Catarina: Escalas geográficas e atores sociais. Tese (Doutorado em Geografia). Florianópolis: UFSC, 2009.

MATTEO, M.; VASCONCELOS, R.; MATTEO, K. de; FREIRE, N. O Brasil em perspectiva territorial: regionalizações como estratégia do desenvolvimento emergente. In.: BOUERI, R.; COSTA, M. A. **Brasil em desenvolvimento 2013**: estado, planejamento e políticas públicas. Brasília: IPEA, 2013.

MP-RN. **Inquérito civil era 026/2011**. Objeto Acompanhamento do processo de regulamentação da Zona de Proteção Ambiental (ZPA) 9 – Ecossistemas de Lagoas e Dunas ao longo do Rio Doce - não regulamentada. Natal: Ministério Público do Rio Grande do Norte, 2011.

MORAIS, N. de; SILVA, M. A. L. da; SILVA, F. H. F. da. A participação institucionalizada em tempos de recessão democrática. **Revista Debates**. Porto Alegre, v. 15, n. 1, p. 223-246, jan./abr. 2021..

MOREIRA NETO, D. de F. **Introdução ao direito ecológico e ao direito urbanístico**: instrumentos jurídicos para um futuro melhor. Rio de Janeiro: Forense, 1977.

MOURA, W. K. de A.; SOUZA, R. F. de; SOUZA, C. R. de; PETTA, R. A.; DINIZ FILHO, J. B. Algumas implicações ambientais da horticultura na região do baixo curso do Rio Doce, ZPA-9, Zona Norte do Natal/RN. In: XIMENES, M. de F. F. de M.; SOUZA, R. F. de (Orgs.). **Meio Ambiente e Saúde Humana**: práticas, vivências e saberes. Natal: EDUFRRN, 2013.

NATAL. Lei Complementar n.º 007, de 05 de agosto de 1994. **Dispõe sobre o Plano Diretor de Natal e dá outras providências**. Natal: Diário Oficial do Município do Natal, 1994.

NATAL. Lei Complementar n.º 82, de 21 de junho de 2007. **Dispõe sobre o Plano Diretor de Natal e dá outras providências**. Natal: Diário Oficial do Município do Natal, 2007.

NATAL. Secretaria de Meio Ambiente e Urbanismo do Município de Natal (SEMURB). Processo n.º 57829/2014-08. **Processo de regulamentação da ZPA 09 (Rio Doce)**. Natal, 2014.

NATAL. **Fluxograma aprovado em assembleia para regulamentação das ZPAs**. Natal: SEGAP/CONCIDADE, 2015a.

NATAL **Proposta de Regulamentação da Zona de Proteção Ambiental 9**: Relatório das contribuições da equipe técnica do Departamento de Planejamento, Projetos e Patrimônio (DPPP) e Setor de Projetos e Planejamento Urbano e Ambiental (SPPUA). Natal: Prefeitura do Natal/SEMURB, 2015b.

NATAL. **Anteprojeto de lei de regulamentação da ZPA-9**. Natal: SEMURB, 2016.

NATAL. **Processos em Análise**. ZPA-9. Apresentação da análise da Comissão. ZPA-9 – Relatório da Comissão. Natal: SEHARPE/CONHABINS, 2017. Disponível em: <https://www.natal.rn.gov.br/conhabins/processos-em-analise>. Acesso em: 31 mar. 2023.

NATAL. Lei Complementar n.º 208, de 07 de março de 2022. **Dispõe sobre o Plano Diretor de Natal e dá outras providências**. Natal: Diário Oficial do Município do Natal, 2022. Disponível em: [https://natal.rn.gov.br/storage/app/media/DOM/anexos/dom\\_20220308\\_extra\\_2072cbec38c85d8665a08f520ebbf138.pdf](https://natal.rn.gov.br/storage/app/media/DOM/anexos/dom_20220308_extra_2072cbec38c85d8665a08f520ebbf138.pdf) Acesso em: 31 mar. 2023.

NATAL. **Atas**. Natal: SEGAP/CONCIDADE, 2023a. Disponível em: <https://natal.rn.gov.br/segap/concidade-atas>. Acesso em: 31/03/2023.

NATAL. **Atas**. Natal: SEHARPE/CONHABINS, 2023b. Disponível em: <https://www.natal.rn.gov.br/conhabins/atas>. Acesso em: 31/03/2023.

NATAL. Secretaria de Meio Ambiente e Urbanismo do Município de Natal (SEMURB). **Agenda PDN**. Atividades realizadas. Natal, 2023c. Disponível em: <https://planodiretor.natal.rn.gov.br/paginas/menu/aba2/pagina1.php>. Acesso em: 31 mar. 2023.

PAREDES, J. P.; TATAGIBA, L.; GALLEGOS, F. R. Tiempos Turbulentos. Giros políticos y horizontes inciertos en América Latina. **Polis – Revista Latinoamericana, Santiago**. Santiago de Chile, v. 21, n. 61, p. 1-8, 2022. Disponível em: <https://doi.org/10.1590/1981-38212014000100017>. Acesso em: 31 mar. 2023

PEREIRA, P. A. S. **Rios, redes e regiões**: a sustentabilidade a partir de um enfoque integrado dos recursos terrestres. Porto Alegre: AGE, 2000.

PERES, R. B; CHIQUITO, E. de A. Ordenamento territorial, meio ambiente e desenvolvimento regional: novas questões, possíveis articulações. **Revista Brasileira de Estudos Urbanos e Regionais**. Rio de Janeiro, v. 14, n. 2, nov. 2012. Disponível em: <https://doi.org/10.22296/2317-1529.2012v14n2p71>. Acesso em: 31 mar. 2023.

RICHARDSON, R. J. **Pesquisa social**: métodos e técnicas. 3. ed. São Paulo: Atlas, 2012.

SANTOS, M. **A natureza do espaço**: Técnica e tempo, razão e emoção. 4. ed. São Paulo: Editoria da Universidade de São Paulo, 2006.

SILVA, C. L.; RAULI, F. C. Avaliação de políticas públicas para o desenvolvimento sustentável: um estudo de caso dos programas de educação de Curitiba de 1998 a 2005. **Semestre Económico**. Medellin, v. 12, n. 23, p. 77-96, ene./jun. 2009. Disponível em: <http://scielo.org.co/pdf/seec/v12n23/v12n23a5.pdf>. Acesso em: 10 nov. 2022.

TALASKA, A. Região e regionalização: Revisão conceitual e análise do processo de reconfiguração fundiária e de alteração do uso da terra na região do Corede Norte/RS. **Caminhos de Geografia**, Uberlândia, v. 12, n. 37, mar 2011.



TATAGIBA, L.; GALVÃO, A. **Os protestos no Brasil em tempos de crise (2011-2016)**.  
Opinião Pública, Campinas-SP, v. 25, n. 1, p. 63-96, jan./abr. 2018.

UFRN. FUNPEC. MP-RN. **Implicações ambientais e urbanísticas decorrentes das propostas de regulamentação da Zona de Proteção Ambiental 9 (ZPA 9), município de Natal/RN**. Relatório Final. Laudo pericial solicitado pelo Ministério Público do Estado do Rio Grande do Norte à Universidade Federal do Rio Grande do Norte. Maio de 2012. Natal: Universidade Federal do Rio Grande do Norte/Fundação Norte-Rio-Grandense de Pesquisa e Cultura, 2012.

\*\*\*