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REGULANDO A SUSTENTABILIDADE SOCIOAMBIENTAL NO PLANO DIRETOR MUNICIPAL DE PORTO VELHO – RO, BRAZIL¹

REGULATING SOCIO-ENVIRONMENTAL SUSTAINABILITY IN THE MUNICIPAL MASTER PLAN OF PORTO VELHO – RO, BRAZIL

REGULACIÓN DE LA SOSTENIBILIDAD SOCIOAMBIENTAL EN EL PLAN DEL DIRECTOR MUNICIPAL DE PORTO VELHO - RO, BRASIL

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Data da submissão: 14/11/2020 Data da aprovação: 03/12/2020

RESUMO: Este artigo pesquisa a competência dos municípios brasileiros em proteger o meio ambiente por meio do plano diretor urbano. O método utilizado é a análise do processo de elaboração participativa do Plano Diretor de Porto Velho de 2021, no qual o autor trabalhou como consultor de direito urbanístico. Serão observadas as fases do trabalho e analisados os documentos de diagnóstico, propostas, projeto de lei e a lei aprovada. Também serão vistas as competências constitucionais dos municípios na Constituição Federal brasileira para regulação urbana e proteção ambiental e as relações entre essas duas áreas. O artigo apresenta a discussão sobre a legitimidade das mudanças políticas no plano diretor sem apoio técnico e o papel do processo de participação democrática, e seus atores, na construção de políticas urbanas. Independentemente dos eventos que comprometem a desejada proteção ambiental da Floresta Amazônica e a eficiência dos serviços urbanos desenhados na proposta técnica, conclui-se que o Plano Diretor de 2021 representa um avanço na política urbana e na regulação da proteção ambiental na cidade amazônica de Porto Velho.

PALAVRAS-CHAVE: Proteção da Floresta Amazônica; Direito Urbanístico; Competências Constitucionais; Federalismo. Estatuto da Cidade.

SUMMARY: This paper researches the power of municipalities in Brazil to protect the environment through an urban master plan. The method used is the analysis of the participative elaboration process of 2021 Porto Velho's Master Plan, in which the author assisted as a land law consultant. It will be seen the phases of the work and examined the documents of diagnostic,

¹ The research for this paper originally considered the Porto Velho's Master Plan Bill of 2020. After submition, the Master Plan Bill was approved by the Complementary Law n. 838/2021 and this research was updated to consider it. The reviewed paper is now republished.

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proposals, the bill's draft, and the approved law. It will also be seen the municipalities' constitutional powers in Brazilian Federal Constitution for urban regulation and environmental protection and the relations between these two areas. The paper presents the discussion about the legitimacy of political changes on the master plan without technical support and the role of democratic participation process, and its actors, in the construction of urban policies. Regardless the events that jeopardize the desired environmental protection of Amazon Forest and the efficiency of urban services designed in the technical proposal, the conclusion is that the 2021 Master Plan represents an advance on urban policy and environmental protection regulation in the Amazon city of Porto Velho.

KEYWORDS: Amazon Forest Protection; Urban law; Constitutional Powers; Federalism; City Statue.

RESUMEN: Este artículo investiga la competencia de los municipios brasileños para proteger el medio ambiente a través del plan maestro urbano. El método utilizado es el análisis del proceso de elaboración participativa del Plan Maestro Porto Velho 2021, en el que el autor trabajó como consultor de derecho urbano. Se observarán las fases de la obra y se analizarán los documentos de diagnóstico, propuestas, proyecto de ley y ley aprobada. También se verán las competencias constitucionales de los municipios en la Constitución Federal brasileña para la regulación urbana y la protección del medio ambiente y las relaciones entre estas dos áreas. El artículo presenta el debate sobre la legitimidad de los cambios políticos en el plan maestro sin apoyo técnico y el papel del proceso de participación democrática, y sus actores, en la construcción de políticas urbanas. Independientemente de los acontecimientos que comprometan la deseada protección ambiental de la Selva Amazónica y la eficiencia de los servicios urbanos diseñados en la propuesta técnica, se concluye que el Plan Maestro de 2021 representa un avance en la política urbana y la regulación de la protección del medio ambiente en la ciudad amazónica de Porto Velho.

PALABRAS CLAVE: Protección de la Selva Amazónica; Derecho Urbano; Competencias Constitucionales; federalismo. Estatuto de la Ciudad.

1 INTRODUCTION

Brazilian's federal system designed in 1988's Federal Constitution (Constituição Federal - CF), the Municipalities have, among others, the power to plan and control de use, the subdivision, and the occupation of urban land (CF, art. 30, VIII). Roughly said, Municipalities have the power to regulate the urban land and the Union the power to regulate the rural land.

Nevertheless, the same Constitution attributes to the Union, to the States, and the Municipalities the power to defend and preserve the environment (CF, art. 225). Therefore, it is reasonable to ask how can municipal urban master plan combines the regulation of urban land use and environmental protection and if it has the power to dictate uses for rural land in other in order to preserve the environment?

In the land law consult work for Brazilian Institute of Municipal Administration (Instituto Brasileiro de Administração Municipal, IBAM) during the elaboration of the Porto Velho – RO urban master plan (2018-2019), we faced many issues regarding Municipality's constitutional power for social-environmental protection, such as conservations units, indigenous' lands, city climate, and rural land division for country houses.

IBAM's job was to assist Porto Velho's municipality in elaborating its master plan. The result of the participatory process was a bill's draft that advanced in these matters of Municipality constitutional power to regulate the rural land for environmental protection in an urban master plan.

In Brazilian's Federal Constitution, as seen, municipalities have the power to plan and control de use, the subdivision, and the occupation of urban land, as well as the power to legislate about urban land law (CF, art. 24, I combined with art. 30, I and II). For that matter, Union and States also have the power to legislate about urban land law, since it is a concurrent (shared) constitutional power. In this concurrent power, Union role is to set general rules, States can regulate regional rules and Municipalities regulate local rules, but cannot overrule a State or Union law (CF, art. 24, §§ 1° to 4°, combined with art. 30, I and II).

The urban policy is part of the urban land law, through which it can be regulated and enforced. The Federal Constitution establishes that the fulfill of urban policy is in Municipalities power, through an urban master plan, and following federal guidelines. In 2001, the Union passed the City Statute, Law n. 10.257/2001, that contains general regulation of urban instruments, principles, goals, and guidelines for urban policies.

One of the rules for master plans in City Statute is that reviews must be made each ten years. That was the scope of the IBAM's hiring and contract, to assist Porto Velho in the review of its master plan and urban legislation.

This study is methodologically based on the analyses of Porto Velho master plan elaboration process, in which we were engaged as a consulting lawyer, showing the facts that conditioned the legal choices made and its juridical fundament.

This study has two main objectives: (I) understand how municipal urban master plan can combine the regulation of urban land use and environmental protection and (II) understand if municipalities have the power to dictate uses for rural land to preserve the environment. To pursuit these objectives, this paper is divided into four parts: (1) this introduction; (2) the

overview of the diagnostics of Porto Velho's territorial and environmental issues; (3) the analysis the legal solutions proposed in 2021 Master Plan and its legal fundaments and (4) the conclusion, followed by the references.

2 PORTO VELHO'S ENVIRONMENTAL ISSUES

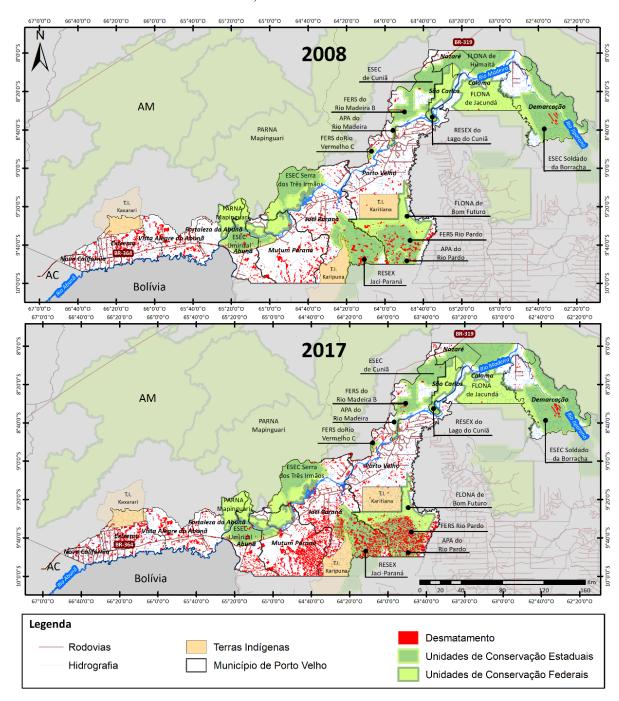
Porto Velho is an amazon city, situated in the Amazon biome in Brazilian's North Region. Capital of Rondônia State, it is the third city with more population in the Region, with 428.527 people in the cense of 2010 and estimated 539.354 for 2020, being in the 46th place in the Country.³ The Municipal territory is 34.090,952 km², the largest State Capital (PORTO VELHO, Setembro 2018, p. 24), having a density of 12,57 inhabitants per km².

The city Master Plan was approved in 2008, Complementary Law (Lei Complementar) LC n. 311/2008⁴, and it had to be reviewed to fulfill the command of ten years revision (article 40, §3° of the City Statute, National Law n. 10.257/2001).

The diagnostics were elaborated in two stages, having been produced a preliminary document and a final document. The final document is the one subject of this study and appointed some challenges to be addressed by the master plan on a municipal scale (urban, rural and forest areas) and on city scale (urban area). In the municipal scale, the principal challenges are the increase of deforestation and territorial, environmental, and social impacts from the recent installation of hydroelectric power plants of Santo Antônio and Jirau in Madeira river (PORTO VELHO, Setembro 2018, p. 12). As can be seen in the figure below, the deforestation had a large increase from 2008 to 2017.

³ https://cidades.ibge.gov.br/brasil/ro/porto-velho/panorama

⁴ https://leismunicipais.com.br/a/ro/p/porto-velho/lei-complementar/2008/32/311/lei-complementar-n-311-2008-dispoe-sobre-o-plano-diretor-do-municipio-de-porto-velho-e-da-outras-providencias?q=plano%20diretor



Map 1 – Comparative deforestation areas in Porto Velho territory between the years of 2008 and 2017, with cumulative data since 2004

PORTO VELHO, Setembro 2018, p. 15. Elaborated by IBAM from datas by IBGE, ICMBio, FUNAI e PRODES.

In yellow/cream, indigenous land; in white, municipal territory; in red deforestation areas and in two shades of green, State, and Federal environmental conservation units.

In 2018, the State Governor, using executive power, issued an Act creating 11 conservation units, with a total of 537 thousand hectares throughout the State. One week later, the Legislators approved several acts and suspended the Governor act. The judicial procedure had not yet been concluded and a preliminary rule has not been issued (PORTO VELHO, Setembro 2018, p. 167).

Deforestation increased mainly in white areas where the policy for land use was the National Environmental Code (former law n. 4.771/65 and current law n. 12.651/2012). The increase was lower but still high in the State conservation units, where there should be a more effective control by the State Government and its police and administrative branches. The lowest increases were in the Federal conservation unit and even lower in the indigenous lands, showing a better land control. The causes of deforestation are shown in the diagnostic:

In the last five years, Porto Velho has been highlighted among the capitals with the highest deforestation rate, directly associated with the implementation of cattle ranching, grain agriculture, and large infrastructure projects. (PORTO VELHO, Setembro 2018, p. 146, translated by the author with Microsoft Translator tool)

The diagnostic performed a thematic analysis of Porto Velho's situation, divided on 6 themes: Economy; Environment; Urban Climate and Climate Change; Mobility and Accessibility; Basic Sanitation and Housing. The environmental problems do not only appear in the environmental analysis. The environmental issues are present as a correlated problem in the others analysis. Also, some of the environmental issues have a solution that passes through these themes. This correlation is important to enable the solution design that shall be integrated with all these themes so it can be more effective.

The economy analysis might be the only one where the correlation was not clearer appointed, maybe because the master plan cannot address it directly. The diagnostic showed the gross domestic product – GDP of Porto Velho, in which the agricultural sector had the participation of 2,4% in 2010, growing to 3,7% in 2015. The sector includes agriculture; livestock and forest production; fishing and aquaculture. The industrial, that includes extractive and mineral industry; processing industry; production and distribution of electricity, gas, water, sewage, and urban cleaning; construction, was responsible for 34% of GDP in 2010 and decreased to 28,3% in 2015. (PORTO VELHO, Setembro 2018, p. 113). Even that we can glimpse the relation between economy and environmental damage, for livestock, agriculture, and extractive, in Porto Velho, this is the object of deeper studies. Nevertheless, some of the

solutions that were presented for the environmental protection pass through assuring better income, better production processes, among others that will be seen.

Among the city/urban scale challenges, we can outstand the land ownership issue, where there are irregularities on land appropriation and dispute over public land ownership between Union, State, and Municipality. Also, the precarity of infrastructure with a complete lack of a sewer system and only 40% of houses with water supply system. The spread of urban tissue is another problem that increases the costs for public services (PORTO VELHO, Setembro 2018, p. 17)

After the diagnostic, there have been two documents of guidelines and proposals, a preliminary one and a consolidated one. The Consolidated Guidelines and Proposal appointed a various number of solutions to be adopted by Porto Velho's master plan (PORTO VELHO, março de 2019). The guidelines and proposals were incorporated in the master plan bill's draft and, therefore, in the proposed bill by the Mayor, which led to the approved law of the Master Plan.

As we will see in next topic, the outcome of the Master Plan review process did not meet the interest of construction sector and the Mayor, prior to the election year, postponed the presentation of the bill for 13 months. Therefore, there are few, but significative, differences between the bill's draft, the bill itself and the law approved by City Council.

3 PORTO VELHO MASTER PLAN OF 2021 ELABORATION PROCESS

The purpose of this research is to understand how municipal urban master plan can combine the regulation of urban land use and environmental protection and if municipalities have the power to dictate uses for rural land to preserve the environment. We are doing so through study case method, analyzing Porto Velho master plan elaboration process, in which we were engaged as a consulting lawyer.

We had the opportunity to overview all process of the master plan elaboration, from diagnostic to propositions and bill's drafting, in which our engagement was more direct. We also followed and assisted the participatory process until the delivery of the final products with

the bill's draft. After that, our interests were only as a researcher. In this role, we sook information about the proposition of the bill and its approval by City Council.

3.1 The review of 2008 Master Plan

The review of the master plan included six major tasks represented by six products: 1. Work Plan; 2. Preliminary Diagnostic; 3. Consolidated Diagnostic; 4. Preliminary Guidelines and Proposals; 5. Consolidated Guidelines and Proposals; and 6. Final Product with seven volumes, being five bills' drafts, one draft on Governor Act to regulate de Constructions and Buildings Code (v5), and one Investment Plan (v7). All documents and data of the process, containing diagnostics, propositions, workshops, public hearings, have been published in the internet.⁵

There were made six volumes of bill's drafts in this order: master plan (v1); use and occupation land law (v2); urban subdivision land law (v3); constructions and buildings code (v4); Advisor City Council⁶ review law and regulation of City Statute's instruments law (v6).

All products were preceded by a democratic participatory process, with community reading, meetings, and workshops. All products were followed by a public hearing to present the results of the process and discuss the product itself. The last public hearing to discuss the bill's draft took place in June of 2019 and its records are published in the City Hall web page⁷.

Due to the pressure of the construction sector that feared new regulations on urban land use could undermine their business, the Mayor suspended a public meeting, that would discuss the draft bill, to give more time for the construction sector to present an alternative proposal, stating that he thinks the rules should easier the red tape so the construction projects can flow and thus the economy as well. The decision took place in a closed meeting with the Mayor and the representatives of this construction sector⁸. In response, representatives of organized civil society, research institutes, and technical advisor, as well as cultural groups and

⁵ https://planodiretor.portovelho.ro.gov.br.

⁶ The City Council Advisor is a council the advice the Mayor about urban policies, legislation, and projects. It was designed by City Statute and implemented by several Municipalities. Its members are designated by the Mayor among Municipal Secretaries, Municipal Public Technical Officers and People's representatives, which are democratic indicated. It does not mistake itself with City Council, the Municipal Legislative Branch, where there are legislators elected by directed municipal elections every four years.

⁷ https://planodiretor.portovelho.ro.gov.br/artigo/25535/audiencia-publica-eventos-finais

⁸ https://noticiastudoaqui.com/artigo/2019Ju17qP505d080306

labor and student unions wrote an open letter to the Mayor, defending the participatory process of the master plan review that took place during 15 months of work.⁹

The meeting was rescheduled for September of 2019, after the construction sector made its alternative proposal and the Municipal Technical Team that coordinated the master plan review defended its original point of view. The final product was delivered, with few adjustments to meet construction sector needs, and published. A municipal conference was held to discuss the master plan and its participatory process. However, the drafts were not introduced by mayor office to Municipal Legislator until October 5th of 2020, more than one year later. It is important to mention that in October/November of 2020, municipal elections took place; the Mayor was reelected, and the City Council had a different composition with 2/3 of the 21 members renewed. The bill was quickly discussed and voted in December, 16 of 2020, just before new representatives took place on January 1 of 2021.

The questions that delayed the proposition of the bill were not directly related to environmental protection but concerns the economic use of urban land, which is the key to environmental protection in city limits and rural areas. There are differences between the final product, presented at the city master plan conference, the bill proposed by the Executive and the law approved, that also received amendments in the City Council.

Therefore, in this paper we will refer to the approved law (Lei Complementar n. 838/2021) as 2021 Master Plan, to the Executive proposition as 2020 Bill and to the draft that result of the city conference as 2019 Technical Participative Proposal. We will only refer to the 2020 Bill and to the 2019 Technical Participative Proposal when there were made changes either by the Executive or by the City Council.

3.2 The outcome of the 2021 Master Plan elaboration process

Recently we found out that State Public Prosecutor recommended¹² that the Mayor, its Secretaries, and the Municipal Public Administration do not respect two articles in the Master

⁹ https://brasil364.com.br/plano-diretor-carta-aberta-ao-prefeito-de-porto-velho-sr-hildon-chaves

¹⁰https://planodiretor.portovelho.ro.gov.br/uploads/arquivos/2019/09/28597/1568300295relatorio-final-comapendice-publicacao.pdf;

https://planodiretor.portovelho.ro.gov.br/uploads/arquivos/2020/07/27807/1595601490 volume-1-apres-pd-rev-04out.pdf

¹¹ https://sapl.portovelho.ro.leg.br/materia/1078

¹² Recommendation n. 1/2021 17^a PJ-PVH, 2021/04/27

Plan approved law, because they undermine the technical elaboration and participatory process, as well violated the public interests.

The main question shows how environmental protection and urban growth (not urban sustainable development) are connected. The City of Porto Velho is set along the right side of Madeira River (Rio Madeira), connected to the left side by a bridge on BR319 Highway. The land use on the left side is mainly rural use and environmental protection, with the Mapinguari National Park and Ciriquiqui Indian Land. Some urban irregular settlements are also present.

The master plan of 2008 contained a guideline to not allow urban land use on the Madeira Rive left side, which was not entirely followed by Administration that failed on exercising police power to prevent and punish irregular occupations. The review of the Master Plan, as we will see, maintained and reinforced the objective of preserve the Rive left side form urban use. This was one of the claims of construction sector discussed with the Mayor. Other claims concerned the coefficient of constructive potential, that were settled in 1,0 by the 2019 Technical Participative Proposal and kept by 2020 Bill.

The approved law for the Master Plan allowed the urban use of the River left side and increased the coefficient of constructive potential by Legislators to 2,0 (Urban and Social Integration Zone), 3,0 (Special Zone of Historical and Cultural Interest) and 3,5 (Riverside Zone), Priority Occupancy Zone and Urbanization Consolidation Zone). Legislator also created a new Periurban Especial Zone, without any technical study, support, or fundament. The State Public Prosecutor delt with the occupation on the left side, recommending that the Administration does not authorize any occupation on Madeira River left side and does not approve anu project in the Periurban Especial Zone. As we can see, the needs of the construction sector (allied to real estate business) go towards finding cheap land to build new houses, regardless the lack of infrastructure and public services.

4 PORTO VELHO'S 2021 MASTER PLAN – CHOICES AND LEGAL GROUND

The 2021 Master Plan¹³ is divided into five titles: I – Urban and Territorial Policies; II – Municipal System of Urban and Territorial Planning; III – Territorial Organization; IV - Land Law Instruments and V – Final and Transitorily Dispositions. It also contains several maps.

In the first Title, I – Urban and Territorial Policies, there are five Chapters, General dispositions, principles, goals, strategies, and themes' guidelines. In next section we will analyze the principles related to environmental protection and previewed actions to their implementation.

4.1 The principles of the 2021 Master Plan

In General Dispositions, the article 3°, §1° establish a commitment of the Municipality with the preservation of the Amazon's biome, with the "standing forest", with the cultural and ethnic diversity, and with sustainable alternatives for urban development.

It is important to ensure that this commitment, as well the principles, goals, and strategies that are in this same Title of Urban and Territorial Policies, influence the interpretation and implementation of all other articles in the master plan since it stands at higher ground in law pyramid. This pyramid applies not only among different laws, but also in the internal structure of a single law when it is organized in this framework of principles, goals, guidelines, and simple rules.

For this matter, article 5 establishes eight principles for the Urban and Territorial Policies of Porto Velho. Five of them can be related to environmental protection, such as:

I. The preservation and valorization of the Amazon Forest as the right of all, women, and men, for the present and future generations;

II. The right to a sustainable city in harmony with the preservation of the Amazon Forest;

III. The social function of the city;

IV. The social function of urban property;

V. The social function of rural property;

VI. Territorial inclusion;

VII. Social and environmental justice;

¹³ https://leismunicipais.com.br/a/ro/p/porto-velho/lei-complementar/2021/84/838/lei-complementar-n-838-2021-dispoe-sobre-o-plano-diretor-participativo-do

(PORTO VELHO, Lei Complementar n. 838/2021, translated by the author with Microsoft Translator tool)

Articles 6, 7, 10, 11, and 12 explain the concepts and deepen of each one of the above principles.

Article 6 The preservation and valorization of the Amazon Forest, understood as ensuring traditional communities the maintenance of their ways of life and cultural practices, implies the establishment of conditions to be observed for the implementation of large economic projects and to encourage sustainable alternatives for the economic harnessing of the forest.

Article 7 The right to the sustainable city for all women and men, understood as ensuring the conditions for municipal development to be socially inclusive, environmentally balanced and economically fair, aims at the quality, maintenance, and endurance of the means of sustaining life for the present and future generations, with the prevalence of territorial inclusion and the reduction of social inequalities.

Article 10 The social function of the rural property comprises the prioritization of the economic use of land oriented to the supply of the essential demands of the population; ensuring the quality-of-life conditions; the economic insertion and endurance of the women and men family producer and traditional communities in their territory and respect for the environmental and legal constraints of land use and occupation.

Single paragraph The social function of rural property is fulfilled when it complies with the provisions of Article 186 of the Federal Constitution of 1988 and in the strategies and requirements for the organization of the territory of Porto Velho expressed in this Master Plan.

Article 11 The promotion of territorial inclusion is due through the facilitation of access to urbanized land to the poorest portion of the population, and it is up to the Government, through the implementation of the proposals of the Master Plan and policies of care for the needy men and women citizen, tackle speculation, the dispersion of urbanization and environmental degradation.

Article 12 Socio-environmental justice occurs through the promotion of actions to mitigate conflicts that are established due to the pressures made by the practice of illegal deforestation, the use of models of economic exploitation of land that oppose the conservation of natural resources, the protection of traditional communities and the production of smaller family, artisanal or organic scale.

Single paragraph The mitigation actions provided for in this article may include encourage of productive structures oriented by sustainability, valuing socio-bio-diversity and access to the resources necessary to strengthen the productive chains of traditional and family populations, which are alternatives capable of generating income and fostering the local market, mitigating tensions, and conflicts.

(PORTO VELHO, Lei Complementar n. 838/2021, translated by the author with Microsoft Translator tool)

These articles are the foundation for municipal actions in rural lands, such as rural macro zoning (Articles 6 and 10) and encourage of the sustainable harnessing of the forest (Articles 6 and 12), encourage of economic insertion and endurance of family producer and traditional communities (Art. 10, 11 and 12, Single paragraph). Along with Constitutional Power given to the Municipalities and other legal power assured by federal laws, the local Government can act in rural area also providing public services of health and education,

licensing and enforcement of safety and health measures of constructions, working with Union and State in environmental licensing and environmental impact study, proceeding rural environmental register.

Even that all these municipal powers were given by the 1998's Brazilian Constitution, and several federal laws, it still an area of no action for many local Governments. Two are the main reasons: the straight vison of Constitutional power and the lack of resources. This second reason becomes clear when the federal Government design programs that transfer money to local Government; those are the activities that are effective and receive support from the local Government. The first reason needs still and advocacy for changing the municipality's view of the local Government's power. We are begging to overcome the traditional thought that Union has the power to rule over rural areas and municipalities have power over urban areas. That is not true, Union has the power to rule over agriculture policy, in which the municipalities cannot interfere. Also, municipalities cannot deprive rural property in defense of social function (CF, art. 184), as it may do over urban property that does not fulfill social function (CF, art. 182). All the other aspects of rural territory may be disciplined by municipalities.

That is the lesson from Nelson Saule Júnior:

If this were not the reading of constitutional norms, how it would be possible for the municipality to protect the environment and combat pollution in any of its forms; preserve forests, fauna, and flora; promote agricultural production and organize food supply; care for the health and public assistance; maintain a pre-school and elementary school education program; combat the causes of poverty and marginalization factors, without considering the entire territory and its population? Not to mention that agricultural and agrarian activities continue to be the main economic activity of the municipalities located in the interior of the states, many of the products coming from the agroindustry source of export. (SAULE JÚNIOR: 2004, p. 46, translated by the author with Microsoft Translator tool)

For the implementation of these principles, the 2021 Master Plan set five strategies, from which we can distinguish City with Forest and Water (Cidade com a Floresta e as Águas, Article 15, I), its goals (Article 16), and its initiatives (Article 17). It is necessary to note that the City Statute (Law n. 10.257/2001, Article 40, §1°) Establishes a mandatory inclusion of the master plan strategies and programs in the municipal budget legislation. This command is reproduced for municipal peculiarity in article 26 of the 2021 Master Plan.

As we will see in the Map 4 below, the name chosen for the strategy, City with Forest and Water, shows the real situation of the Municipality, so the people and the Administrators never forget that the City of Porto Velho is a small portion of land, inside the Amazon Forest,

along the large Madeira River, and this land occupied by men is often reclaimed by the forces of nature, through rain, floods, forest growth among other.

4.2 The environmental protection in the territorial macro-zoning

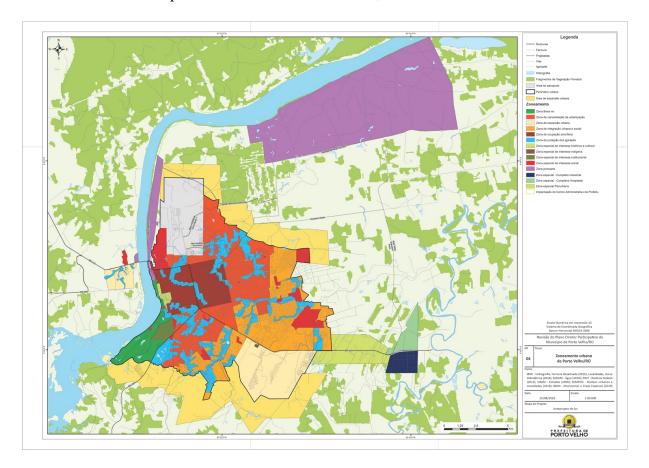
According to this understanding of municipal's power, 2021 Master Plan designed three municipal macro-zones, the Urban Macrozone, the Socio-biodiversity Valuing Macrozone, and Sustainable Rural Macrozone.

In Urban Macrozone (correspond to the city scale issues appointed in the diagnostic, as seen before in item 2 of this paper) is important to observe the Urban Zoning, in which there are areas of environmental protection, such as the Riverside zone (Zona Beira Rio) in green, Igarapes protection zone (Zona de proteção dos igarapés) in blue and the indigenous interest special zone (Zona especial de interesse indígena) in a shade of purple/brown. The Map 2 below shows the Urban Area and its zones set by the 2019 Technical Participative Proposal and kept by 2020 Bill.

Legenda
Rodovina e Estradas
Rodovina e Estrada

Map 2 – Urban area of Porto Velho, 2019 Technical Participative Proposal and 2020 Bill.

PORTO VELHO, Setembro 2019, p. 90 and 2020 Bill p. 88



Map 3 – Urban area of Porto Velho, 2021 Master Plan.

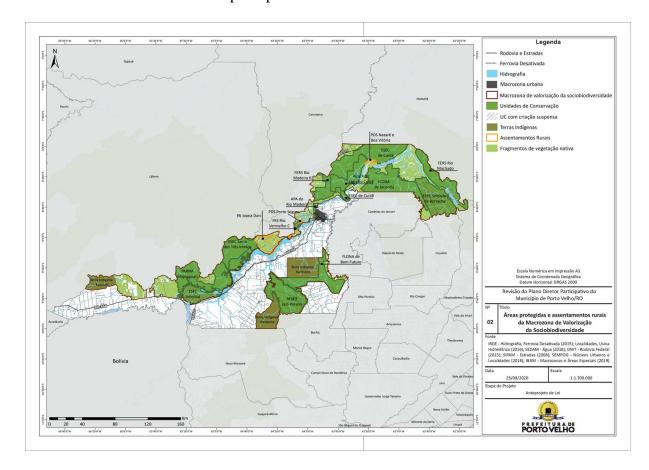
PORTO VELHO, 2021, Master Plan, Attachments, p. 6

The Municipal Legislators included the Urban expansion area (in yellow) and the Periurban Zone (light green), undermining the guidelines to restrict the urban spread and increase the use of the existent infrastructure in the priority occupation zone (art. 18, I, II and III). The Riverside zone and Igarapes protection zone (art. 64) are stablished with bigger limits than the corresponding permanent preservation area of the Federal Law n. 12.651/2012, Environmental Code.

The Indigenous interest special zone acknowledges that the indigenous culture activities and way of life in this area are an important value for the history and culture endurance of the City. It does not create an indigenous territory, since this power was given to the Union, exclusively (CF, article 231).

Article 75. The Special Zone of Indigenous Interest (ZEInd) delimits the area occupied by the Kassupá Indians, intending to recognize the historical and cultural relevance for the municipality of the indigenous presence in the city of Porto Velho and ensuring conditions for this ethnicity to preserve its socio-cultural values, respecting the competencies of the federative entities in this theme.

Back to the macro-zoning, in the map below, in grey, Urban Macrozone; in white, not colored, Sustainable Rural Macrozone and in different types of colors the different uses of the Socio-biodiversity Valuing Macrozone: in dark green conservation units; in diagonal red lines the conservation unit's whit creation suspended; in green-brown indigenous land, inside yellow lines, rural settlements and in light green remains of natural forest.



Map 4 – protected areas and rural settlements.

PORTO VELHO, 2021, Master Plan, Attachments, p. 4

The Socio-biodiversity Valuing Macrozone was characterized by article 49:

Article 49. The Socio-biodiversity Valuing Macrozone corresponds to the parts of the territory of Porto Velho that make up large forest corridors, encompassing the ways of life of indigenous peoples, agroextractivities, riparians, rubber tappers, and family farmers.

(Translated by the author with Microsoft Translator tool)

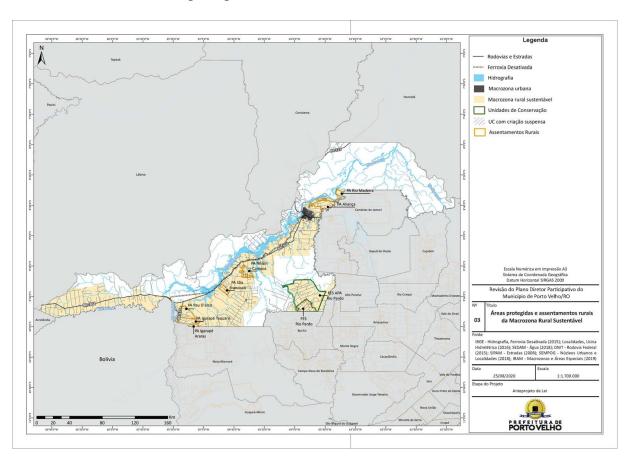
Article 50 sets the Socio-biodiversity Valuing Macrozone's objective of assurance the effectiveness of forestall and territorial protection of the institutionalized areas. Its paragraph explains that:

§ 1 - These are areas already institutionalized, which make up the Macro-zone for the Valorization of Sociobiodiversity, Conservation Units, Indigenous Lands and Rural Settlements listed on Map 2 of Attachment 1.

(Translated by the author with Microsoft Translator tool)

To goal of this macrozone is to ensure the effectiveness of legally protected forests and territories and avoid the increase of deforestation in areas not legally protected through the encouragement of sustainable forest practices. The article 51 list several guidelines and programs of training, adoption of new sustainable technologies, income increase, product certification, research, innovation, reduction of emissions from deforestation and forest degradation, among others.

In the Sustainable Rural Macrozone map, in grey Urban Macrozone; in white, not colored, Socio-biodiversity Valuing Macrozone; in cream Sustainable Rural Macrozone; inside green lines conservation units; in diagonal red lines the conservation units whit creation suspended; inside yellow lines rural settlements.



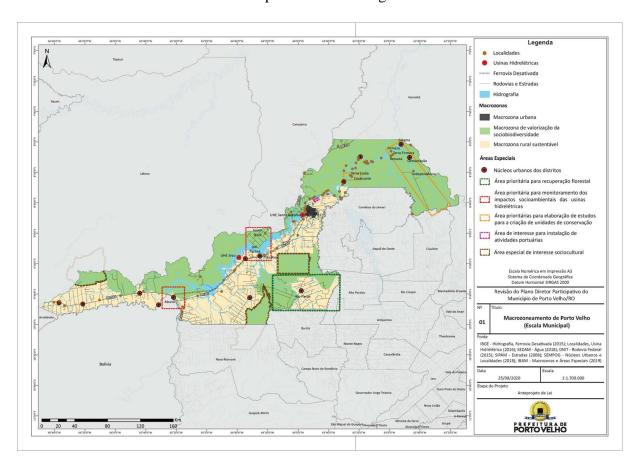
Map 5 – protected areas and rural settlements.

PORTO VELHO, 2021, Master Plan, Attachments, p. 5

The goals of this Macrozone are rural production compatible with the rational use of its natural resources, adopting agroforestry systems, and environmental recovery (article 52). This area is in between the Urban Macrozone and the Socio-biodiversity Valuing Macrozone, functioning as a shield for the forest.

Article 53 sets a list of guidelines and programs of training, adoption of new sustainable technologies, income increase, product certification, improvement of the commercial chain, land environmental regularization, seeds exchange fairs, among others.

And then, a map with all Macrozones together. In grey Urban Macrozone; in green Socio-biodiversity Valuing Macrozone; in yellow Sustainable Rural Macrozone. In dashed green Priority Area for Forest Recovery; in dashed red Priority Area for Monitoring the Socio-Environmental Impacts of Hydroelectric Power Plants; in dashed yellow Priority Area for the preparation of Studies for the Creation of Conservation Units and in dashed brown Special Areas of Sociocultural Interest.



Map 6 – Macrozoning

PORTO VELHO, 2021, Master Plan, Attachments, p. 2

Alongside with the macrozoning, there were created special areas that overlap the macro-zones. Four of them are important for environmental protection: Priority Area for Forest Recovery; Priority Area for Monitoring the Socio-Environmental Impacts of Hydroelectric Power Plants; Priority Area for the preparation of Studies for the Creation of Conservation Units and Special Areas of Sociocultural Interest. This last one corresponds to indigenous territory already demarcated by the Federal Government.

These special areas are responses to issues pointed in the diagnostic (item 2 of this paper) that could not be resolved with macrozoning itself. The main goal of macrozoning was to separate urban, farming, and forest land on a large scale, but this type of zoning does not recognize the use of the land that coexist in each macrozone (PORTO VELHO: Setembro 2019, p. 11.). For example, in Urban Macrozone, urban activities ¹⁴ must coexist with environmental protection of urban green areas, of urban rivers, and any environmental peculiarities of the territory that impact housing, building, and constructions. It is also necessary to accept and preserve farming activities in Urban Macrozone when they do exist, and even stimulate this use of the land that helps contain urban expansion.

In the Rural Macrozone, which was divided into sustainable production zone – Sustainable Rural Macrozone – and forest sustainable use and preservation zone – Sociobiodiversity Valuing Macrozone, it is necessary, as well, to recognize the environmental protection of green areas beside farmland and, also, encourage sustainable farming practices and avoid farming expansion. In the same way, in the forest, we must regulate economic activities the ensure the maintenance of riparians, rubber tappers, and family farmers in those areas so they can help protect the forest and not migrate to poor urban areas.¹⁵

Therefore, the design of special areas that overlap the macrozones addresses some issues like the forest recovery in those areas that struggled with deforestation in the past decade, as seen in the diagnostic - Priority Area for Forest Recovery; or like the necessity of further studies to resolve, prevent and undermine the environmental impact of new hydroelectric power plants - Priority Area for Monitoring the Socio-Environmental Impacts of Hydroelectric Power Plants; or also to recognize the protect the environment in the area that had a conservation unit

¹⁴ Urban activities do not only need to coexist with environmental protection but also are limited and shaped by the environmental function of property, such as sewer, planting trees, and adapting buildings for a better city climate.

¹⁵ Brazilian law only recognizes urban and not urban territories, which bring a problem for legislating about rural villages and industries that cannot be near the city, but in some cases need to be legally in urban areas.

created by the Governor but suspended by State Legislator - Priority Area for the preparation of Studies for the Creation of Conservation Units.

Over of all, the Special Areas of Sociocultural Interest corresponds to indigenous territory already demarcated by Federal Government, which remains, over 500 years ¹⁶, under the attack from non-indigenous for the lumber industry, mining, livestocking. ¹⁷ Struck by the fear of setbacks on federal indigenous policy, social movements made a claimed for a better protection of indigenous land. Recognizing the importance of the indigenous culture and the need to protect their land, the 2021 Master Plan created these Special Areas of Sociocultural Interest.

The municipality, as seen, does not have the power to create indigenous land nor to avoid Federal setbacks on indigenous policy. Nevertheless, the municipal territorial planning, that includes urban and rural area, can identify and signalize that the actual way of indigenous life, culture and respect for land is a value for all people as well as for keeping the forest protected.

5 CONCLUSIONS

In the process of Porto Velho's Master Plan review, the diagnostic showed several issues, such as the spread of urban tissue, lack of urban infrastructures, land ownership, deforestation, territorial, environmental, and social impact of the new hydroelectric power plants.

Economic use of land is one of the biggest factors of these issues. Urban tissue spread is caused by speculation of land near downtown and lower prices going far away (such as the River left side). This impacts the infrastructure's costs and make pressure on rural land, which

¹⁶ Indigenous leader and environmentalist Ailton Krenack speak about how indigenous are constantly under attack from white men and the Brazilian Government. The fact that his tribe is in the Southeast, it does not differ from the North Region where Porto Velho is located and not differ from the rest of the country. http://mapadeconflitos.ensp.fiocruz.br/?conflito=mg-povo-indigena-krenak-segue-lutando-por-reconhecimentoe-demarcacao-total-de-seu-territorio-tradicional. And https://www.youtube.com/watch?time_continue=10&v=IrimVptCFqw&feature=emb_logo. For of Velho's indigenous some Porto conflicts see http://mapadeconflitos.ensp.fiocruz.br/?uf=ro&post_types=conflito.

forces theses urban activities into the forest. The livestock activity also makes pressure on the forest in the need for more land, exploiting lamber, and mining activities.

The 2021 Master Plan is aligned with the interpretation of municipalities' constitutional power to legislate over urban and rural land (not legislating about agriculture policy), employing different solutions to address these issues.

First, the Master Plan set principles that express the Government's commitments to preservation of the Amazon Forest; with the right to a sustainable city, with social and environmental justice, all of them for women, men, and future generations. These commitments not only force the Government to respect rights but also to ensure rights, making public policies in other to their effectiveness. These commitments influence the interpretation and implementation of all other rights in the master plan and urban legislation, as well as influence administrative actions and decisions, Judiciary decisions, and the very right of urban, and rural property are conditioned by master plan principles and rules.

Second, the Master Plan proposed strategies and programs that shall be incorporated in the budget legislation to become public policies.

Macrozoning was the third instrument to face environmental issues. The division of non-urban areas in Sustainable Rural Macrozone and Socio-biodiversity Valuing Macro-zone indicates where the public policies must be, and in favor of whom, they should be held. Here, the economic instruments are important to capacitate family farmers, riparians, indigenous and stimulate sustainable production practices, improve the chain of commerce and, therefore, allows families and local producer to support themselves, preserve indigenous' cultural way of life, preserve the forest.

The urban zoning is, as well, of importance to preserve the city environment and climate by setting protection zone over the river and igarapes, larger than federal law. Instruments to ensure the use of urban land and to contain the spread of urban tissue are in this list of instruments.

The creation of special areas that overlaps the macrozones shows the relevance of some themes, as forest recovery; socio-environmental impacts of hydroelectric power plants; creation of conservation units (that was suspended by State Legislator), and indigenous territory already demarcated by the Federal Government. This does not disrespect federal power to create

indigenous territory but indicates the importance of their protection for Porto Velho municipality and its people.

Therefore, the not only municipal urban master plan can combine the regulation of urban land use and the environmental protection in city limits, but it can also indicate uses for rural land through macrozoning and organize public policies the ensure environment protection in benefit of women and man, especially the needed ones, and for present and future generation.

As seen, The Mayor waited 13 months to propose the Master Plan Bill, doing so just a month before Municipal elections¹⁸ where he would be reelected and only a third of Representatives would continue to another term of four years. Therefore, 2/3 of the Representatives that would not continue after 2021 January 1st, with 1/3 reelected, made and vote amendments allowing urban use of River left side, created an urban expansion area and periurban zone. They also rewrote some articles about environmental protection, that need a further analyzes, but, for the matter of the present study, they do not impact the environmental protection as seen here.

The 2021 Porto Velho Urban Master Plan in an advance in terms environmental protection by urban legislation, employing instruments within the Municipal competence, aligned to the Federal Constitution principles and rules. Will these initiatives to protect Porto Velho's indigenous way of life and territory and to preserve its portion of Amazon Forest prevent the current threats from logging, mining, and stocking increased by Federal Government policies?

Will prevail the affords of State Public Prosecutors to defend the technical elements of Master Plan participative process over the political decision of Municipal Legislators due the pressure of economic actors?

Will the women and men of the "City with Forest and Water" be able to maintain their way of live and keep the Forest standing against the interest of the construction, farmers, and logging industries?

¹⁸ Due to the Covid-19 Pandemic conditions the Municipal elections had its first round in 2020, November 15 and second round in 2020, November 29.

We fell that this paper not only fulfilled its objective to show way for environmental protection by Urban Master Plan, but also showed the comes and goes of the Urban Policy democratic process.

The questions above, only time can answer. We will keep an open eye.

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