The pedestrian place in urban mobility plans in Minas Gerais (Brazil)

Os planos de mobilidade urbana em Minas Gerais (Brasil) e sua relação com o pedestre

Planes de movilidad urbana em Minas Gerais (Brasil) y su relación con los peatones

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ABSTRACT
This research presents a survey of the Municipalities of the State of Minas Gerais (Brazil) with population above 250 thousand inhabitants that have Urban Mobility Plan sanctioned according to a Federal Law. This survey is be carried out using exploratory research through the recording data on the website of the Ministry of Cities, between the days 18.09.2023 to 20.09.2023. It was found that only 53.45% of municipalities are in compliance with the legislation. When analyzing municipalities with up to 250 thousand inhabitants, it was found that only 13.11% meet the legal requirements. From this survey, it was possible to outline an overview of Brazilian municipalities that are legally required to have Urban Mobility Plans. It was found that Belo Horizonte, Contagem, and Governador Valadares have plans approved by law, allowing for an examination of their relationship with pedestrians. The outcomes presented in forms of graphs, that compare the different Brazilian scenarios regarding the Urban Mobility Plans focusing mainly the pedestrian way of displacement.

Keywords: pedestrian, Belo Horizonte, Contagem, Governador Valadares.

RESUMO
O presente trabalho apresenta um levantamento dos Municípios do Estado de Minas Gerais com população acima de 250 mil habitantes que possuem Plano de Mobilidade...
Urbana aprovado de acordo com a Lei Federal. Esse levantamento, será realizado através de uma pesquisa exploratória, através da coleta realizada no site do Ministério das Cidades, entre os dias 18.09.2023 à 20.09.2023. Foi verificado que somente 53,45% dos municípios estão em conformidade com a legislação. Ao analisar municípios com até 250 mil habitantes, verificou-se que apenas 13,11% atendem aos requisitos legais. A partir desse levantamento foi possível traçar um panorama dos municípios brasileiros, obrigados por lei, a possuir Plano de Mobilidade Urbana. Foi constatado que Belo Horizonte, Contagem e Governador Valadares possuem planos aprovados em lei, propiciando confrontar a sua relação com o pedestre. Os resultados serão apresentados em formas de gráficos, que comparam os diferentes cenários brasileiros referentes aos Planos de Mobilidade Urbana e sua relação com os pedestres.

Palavras-chave: pedestre, Belo Horizonte, Contagem, Governador Valadares.

RESUMEN
Este trabajo presenta un estudio de Municipios del Estado de Minas Gerais con población superior a 250 mil habitantes que cuentan con un Plan de Movilidad Urbana aprobado de conformidad con la Ley Federal. Esta encuesta se realizará a través de una investigación exploratoria, mediante recopilación realizada en el sitio web del Ministerio de las Ciudades, entre el 18.09.2023 y el 20.09.2023. Se encontró que sólo el 53,45% de los municipios se encuentran cumpliendo con la legislación. Al analizar los municipios de hasta 250 mil habitantes se encontró que sólo el 13,11% cumplen con los requisitos legales. A partir de este estudio fue posible obtener un panorama de los municipios brasileños, obligados por ley a contar con un Plan de Movilidad Urbana. Se constató que Belo Horizonte, Contagem y Governador Valadares cuentan con planes aprobados por ley, lo que permite comparar su relación con los peatones. Los resultados serán presentados en forma de gráficos, que comparan los diferentes escenarios brasileños en cuanto a los Planes de Movilidad Urbana y su relación con los peatones.

Palabras clave: peatonal, Belo Horizonte, Contagem, Governador Valadares.

1 INTRODUCTION

More than 84% of Brazilian population live in cities. In this realm people should have job opportunity alongside with education, health, leisure and all other dimensions of daily life. However, in most of cities urbanization advantages is out of reach for a great deal of people.

At 16th century, Milton Santos (2013) argues, Brazilian urbanization had its beginnings, but it was then just city legal establishment and not an urbanization as such. As urban complex scenario increased, urban mobility became a recurrent issue due its impact on the life of the city. Having this subject as aim, on January 3, 2012, Federal Government sanctioned the Law n.

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12.587, known also as “Estatuto da Cidade” (City Statute) that deals with the National Urban Mobility Policy. There one finds norms and instructions to promote universal access to the city goods as an urban policy (Brasil, 2012).

This research has as guideline and aim identify which medium-sized municipalities – with a population more than 250 thousand inhabitants – in the Brazilian state of Minas Gerais have an Urban Mobility Plan approved by a law and how are the relationship of this law and pedestrians. That said, it is worth clarifying that urban mobility plans are really meaningful for municipalities, since they manage city development and so promote access to the city as a whole. Even so, it’s quite amazing that with this research found just few studies on the topic.

The ability to carry out meaningful activities is directly linked to mobility, which includes the transportation options available to each individual. These modal options are essential for mobility to function, as they represent the means of transport chosen by people based on their capabilities. In this context, the use of modes such as walking, cycling, public transport, motorcycles and cars is considered for trips related to education and health (Freire et al., 2023).

This survey had as information ground the data on the Ministry of Cities website. Ahead these data will be presented through graphics that will enable analysis, comparisons, and debates, contributing to an overview of the Minas Gerais scenario.

This research has five main sections. The first section is an introduction to the issue and its relevance. In the second section is a bibliographic review of the legislation. The third section demonstrates how the exploratory research of the data presented was carried out. The fourth section is intended to be an analysis and discussion of the data found. In the fifth and last section, one finds final remarks about this research.

2 LITERATURE REVIEW

It was a social advancement the inclusion in the 1988 Brazilian Federal Constitution of a
specific chapter on urban policy. In this Constitution the principle of the social function of urban property was issued. However, to be effective, this legal proposal relied upon specific complementary legislation and this linger for almost eleven years of social mobilization, legal elaboration and party negotiations. All this end up with the sanction of the City Statute in 2001. Due to the strengthening of social conscience of social urban policy the Ministry of Cities it was set up, in 2003. In this institution, the most relevant areas – from economic and social point of view – was brought together aiming the development of urban strategies. All this was coordinate by National Urban Development Policy which long for, as a final objective, to improve material and subjective conditions of life in cities, with social inequality reduction and the guarantee of environmental, social and economic sustainability (Ministério das Cidades, 2007).

The Law n. 12.587, of January, 3, 2012, issuing the norms for the National Urban Policy, should be the guide for the urban planning sustainable (Brasil, 2012). The National Policy for Urban Mobility is the main tool of the urban development policy foreseen in Section XX of art. 21 and art. 182 of the 1988 Brazilian Federal Constitution. This was issued aiming an integration between different transport modality and the improvement of the accessibility and mobility of people and cargo in the municipality's territory.

The Law n. 12.587 states that:

The National Urban Mobility Policy has as aims contribute to the city universal access. So doing it promotes and is a tool for conditions that concur to build up the implementation of urban development policy principles, objectives, and guidelines, through National Urban Mobility System planning and democratic management.

The May, 16, 2020 Law under the n. 14.000/2020, modify the Law n. 12.587/2012. Its first article follows in this way:

Article 24 § 1 These municipalities are obliged to prepare and sanction an Urban Mobility Plan: I – those with more than 20,000 (twenty thousand) inhabitants; II – municipalities members of metropolitan regions, integrated regions of economic development and urban agglomerations with a total population of 1,000,000 (one million) inhabitants or more; III – municipalities part of tourist interest areas, including coastal cities whose mobility dynamics normally change on weekends, holidays and vacation periods, due the influx of tourists, according to criteria to be established by the Executive. In Article 24, § 4º, the Urban Mobility Plan must be prepared and sanctioned within the following deadlines: I - until April 12, 2022, for Municipalities with more than 250,000 (two hundred and fifty thousand) inhabitants; II - until April 12, 2023, for Municipalities with up to 250,000 (two hundred and fifty thousand) inhabitants (Brasil, 2020).
For a certainty of a good urban mobility, it’s not enough only to think about the transport means and traffic. One must have in mind how the city occupation is organized and the best way to guarantee access for people and goods of the city: for instance, places of employment, schools, hospitals, squares and leisure areas. Therefore, to build an urban mobility policy that guarantees the rights to all, prioritizing public transport, on foot displacement and by bicycle is at stake (Ministério das Cidades; Instituto Pólis, 2005). One of the main challenges is to deal with the urban mobility issue having at hand all its dimensions: social inclusion, environmental sustainability, participative management and the public spaces democratization. All this should focus on promoting urban and economic development (SEMOB, 2006).

The mobility problems intricacy found in urban centers is influenced by several factors. They vary due the scenario built up by the individual needs of the inhabitants, which are deeply related to the way in which public space is used for displacement. The challenge here is to make the most effective use space intended for mobility. The traffic displacement designed areas are almost always less than necessary to meet people growing demand. Nothing saying, of course, about the influence of the use unfit of the earth ground and its characteristics (Oliveira, 2015).

In the realm of this research, were found no study published dealing with Urban Mobility and Pedestrians issue. These would help meaningfully the Minas Gerais municipalities covered by this research study if they would like improve way designed for pedestrian displacement. However, even if this is almost a lonely star, one finds the Franca and Faria, Mesquita and Souza, Filho and Abreu insights for Belo Horizonte and Governador Valadares cities.

With a close reading, one could see the law evolution, which helps the cities in their way to incentive the non-motorized transport, valuing collective public transport. All this aims, of course, the improvement of people's quality of life for instance by reducing pollution, promoting health and safety.

3 METHODS AND RESEARCH CONTENT

Methodologically, this research adopts a bibliographic/documentary research design and this consists of critical analyzing researches content already published on the topic. The sources are scientific journals articles and laws seen under a critical review in order to examine this existing literature and its theoretical contextualization of the issue.
The comparative method and through exploratory research are employed here for data analysis. At the same time, we list the municipalities in the State of Minas Gerais, with more than 250 thousand inhabitants. These municipalities sanctioned a law of Urban Mobility Plan. We found this in a search carried out on the website of the Ministry of Cities, between 18.09.2023 and 20.09.2023. Data were collected through the status of urban mobility plans elaboration.

In this research, the outcomes will be presented in graphics allowing a parallel between several Brazilian scenarios having as focus the Urban Mobility Plan and its relationships with pedestrians. The difficulty found in this study was the little number of information available on the Ministry of Cities website.

4 ANALYSIS AND OUTCOMES DISCUSSION

An overview of the issue was drawn as a start point. This information was gathered on the Ministry of Cities website, which allows us to build up Graph 1. In this way it was possible to have an overall view of all Brazilian municipalities with more than 250 thousand inhabitants. All these municipalities legally are required to sanction an Urban Mobility Plan. From the universe of 116 municipalities, only 62 were up to date with this law, which represents 53.45% of the municipalities.

Making the same parallel research, one finds 1.579 municipalities having up to 250 thousand inhabitants. Here one finds only 207 with a due sanctioned law and this represents 13.11% of all the universe of Brazilian municipalities. Although numbers are not all that matters, the scenario is better when the focus is the municipalities with more inhabitants.

It seems that the lack of an Urban Mobility Plan for cities with more than 250 thousand inhabitants would be more harmful than for smaller cities. Even without a technical explanation, it’s supposed that larger cities would have, for instance, greater purchasing power, greater technical capacity and greater obstacles as well. This is the case of everyday life troubles like traffic jam, air pollution, noise and insecurity. Paradoxically, all this could be a boost for the development of a Plan of Urban Mobility once it’s this planning instrument that allows municipalities to improve people's quality of life and well-being.

The lack of an Urban Mobility Plan turns out in a kind of blockade in the “race” for financial investments from the federal government. This slows up their growth and development
having as outcome a poor division of resources, harming the environment sustainability and equity at the use of urban space.

![Graphic 1. Urban Mobility Plan – Brazilian municipalities with more than 250 thousand inhabitants](source)

Source: Own author’s elaboration, from the Ministry of Cities (2023a).

In the Graphic 2 one can see from the data of the Brazilian Institute of Geography and Statistic, that Brazil has 5,568 municipalities, and a Federal District and a State District of Fernando de Noronha, and that only 291 have Urban Mobility Plan sanctioned as required by law.

![Graphic 2. Brazilian municipalities with an Urban Mobility Plan](source)

Source: Own author’s elaboration, from the Ministry of Cities (2023a).

In the Minas Gerais State Only three municipalities have an Urban Mobility Plan as a law sanctioned: Belo Horizonte, with the Ordinary Law n. 11.181/2019; Contagem via Ordinary Law n. 4.830/2016, and Governador Valadares with the Complementary Law n. 286/2014.
The Belo Horizonte city Urban Mobility Plan is detailed, having even a Bicycle Use Incentive Program, whose name is Pedala-BH (Cycling-BH). For instance, in 2015, it extended over 83.28 km of cycle paths. Along with this one gets the Zone 30 km/h velocity and the removal from Hipercentro, street vendors and it was issued the norms for access to gas stations, prioritizing pedestrians and so reducing walking “conflict” in the street, improving conditions for those displacement on foot (Belo Horizonte, 2017).

The municipality of Governador Valadares had its main attention and concern turned to the displacement kinds using non-motor ways and building up pedestrians spaces for living together like large walking pavement. Zones with maximum speed 30 km/h were improved and life street as well. Unfortunately, there is not even a draft that make these improvement possible (Governador Valadares, 2020).

It’s not difficult imagine that Urban Mobility Plans should have a great relevancy to Brazilian municipalities. They influence, for instance, people quality of life, economy, environment and social inclusion. Having this as aim, municipalities should prioritize public policy actions that promote walking as a way of getting around in the cities. As an example of this one can see the Mobicentro Project, in Belo Horizonte, which was integrated in its Urban Mobility Plan. In 2018, it carried out twenty-five small shifts as changes in car’s movement, new signage, amelioration of sidewalks, setting up islands refuge, among others. All this led to an 18% the reduction in the number of people being run over, winning international recognition and earning two international awards (Prefeitura de Belo Horizonte, 2018).

However, seeking to improve the Urban Mobility Plans studies were listed in the city of Belo Horizonte. They highlight the insertion of tactical urbanism as a formal tool in urban planning that can foster new local possibilities and immediate action strategies. This was useful when facing of crises like COVID-19. The outcome of one of these researches was published in 2021, in the Alta Paulista Environmental Forum (França; Faria, 2021). Another study aiming to propose a criterion for evaluating the degree of cycling mode participation in city master plans and urban mobility, was published in 2021, in the Brazilian Journal of Development (Mesquita; Souza, 2021).

In 2014, focusing in the Governador Valadares municipality there was a study regarding noise pollution in the central area of that municipality. It was published at the IX Simpósio Internacional de Qualidade Ambiental – IX International Symposium on Environmental Quality
(Filho et al., 2014). In Contagem, a study was found regarding the bicycle as a means of displacement integrated with buses at Terminal Ressaca, in the Belo Horizonte Metropolitan Region. This research was published at the XXIX Congresso Nacional de Pesquisa em Transporte da Anpet – XXIX National Congress of Transport Research at Anpet, in 2015 (Abreu et al., 2015).

The other municipalities in the State of Minas Gerais, i.e. six municipalities with more than 250 thousand inhabitants, do not have the sanctioned urban Mobility plan. As one can see in the Ministry of Cities spreadsheet, the municipality of Montes Claros does not have a plan, Ribeirão das Neves did not inform it to the Ministry. The other four municipalities (Betim, Juiz de Fora, Uberaba and Uberlândia) have an Urban Mobility Plan, however there is no a sanctioned law about this.

The Juiz de Fora municipality hadn’t its Urban Mobility Plan sanctioned by a Municipal Law, but just via an Executive Decree, even so the actions designed for the city follow under partnerships with firms and corporations and public institutions. These partnerships have the aim improve traffic and so would help positively in the public transport system and traffic safety as well (Menini et al., 2023).

Despite the progress one finds in Belo Horizonte plan, there is still a lack of a more ambitious project focusing on pedestrians. As an example, we mention Porto Maravilha, in the city of Rio de Janeiro. This project provided a lasting legacy that goes beyond the creation of the Museum of Tomorrow and the recovery of Praça Mauá at that place. This project placed individual automobile transport in low priority, with the appreciation and priority for the public transport, expansion of the cycle path network and pedestrian sidewalks, for instance. Nothing saying about the first place given to accessibility that allows integration between different means of transport. Building up this allowed, from the pedestrian's perspective, an appreciation and integration of the space. To following the Rio de Janeiro example, other cities of course will face some challenges to develop and improve projects aiming at pedestrian convenience (PORTO MARAVILHA, 2023).

Outcome analysis evidences, bearing in mind the Law n. 14,000, that the first deadline for municipalities to sanction the Urban Mobility Plan end up. The municipalities that do not have the Urban Mobility Plan sanctioned are disqualified and do not receive federal financial resources. Lacking these resources for urban mobility engenders negative impacts in, for
instance, the economic and equal development of municipalities (Law 14,000/2020).

It should be highlighted, however, the information published on the Ministry of Cities website. It deals about a draft of a proposed law presented by the President Luiz Inácio Lula da Silva to the National Congress which aims to modify Law n. 12,587/2012 (National Policy of Urban Mobility). The main point is to delay the deadline for municipalities to create and sanction their Urban Mobility Plans. The dispatch was published in the Official Diary of the Union, on Thursday, October 19, 2023. That proposition of law establishes that municipalities with up to 250 thousand inhabitants have until April 2025 to prepare and sanction their plans, and the dead line for municipalities with more than 250 thousand inhabitants is April 2024. Furthermore, there is a purpose of access restriction to federal financial resources for urban mobility for those municipalities that do not prepare plans. Some of these resources could be delivered and employed in the formulation the plan itself (Ministério das Cidades, 2023b).

5 FINAL REMARKS

The development of Urban Mobility Plans by Brazilian cities is mandatory, despite this data evidence that the subject is not look after in most cities even when it’s so meaningful. In some cities there is a concern in with traffic fluidity and quality of public transport, however there is no focus on pedestrians.

Pedestrians must receive more attention, not only because they are at risk in the traffic, or because they do not cause traffic jam. Jams are due to the lack of adequate infrastructure for motor vehicles. Pedestrians represent a form of sustainable mobility, favoring a better quality of life, democratizing public spaces as a consequence of the walking together.

That Urban Mobility Plans put pedestrians as the main issue is primordial. This could be done, through projects that aim to improve walking as way of displacement. What is more, this provide several benefits, such do not generate social expenses, favor social integration, improve people’s physical and mental health, and are a way of sustainable people displacement and indirectly promote local commerce and tourism as a way of more income and employment for the people as a whole.
REFERENCES


