

Scoping Paper Belo Horizonte - Brazil



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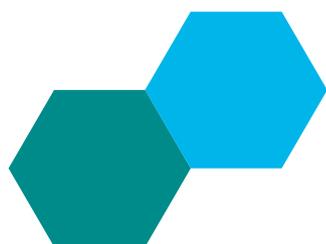
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SCOPING STUDY SUMMARY



COUNTRY OVERVIEW

Brazil, one of the five emerging economies that constitute the BRICS, has a population of 208 million inhabitants extended over an area of 8.5 million km² in South America (IBGE, 2017). Worldwide, Brazil is the 5th largest country by area and the 6th by population. In terms of greenhouse gas (GHG) emissions, Brazil is the 7th largest emitter. In its NDC, Brazil commits to reduce GHG emissions by **37% below 2005 levels by 2025** and 43% by 2030, which translates into a 6% and 16% compared to 1990 levels, respectively. These targets turned Brazil into the first major developing country to commit to an absolute GHG reduction below 1990 levels (Federative Republic of Brazil, 2015). With regard to its population growth, Brazil is characterised by a concentration of population in the south-eastern region, lead by the mega-cities of Sao Paulo and Rio de Janeiro, with a concentration of approximately 40% of the Brazilian population and more than 50% of the GDP. Belo Horizonte, also located in the south-eastern region, is the capital of the state of Minas Gerais and the 3rd largest metropolitan area in the country. Belo Horizonte has a population of over **2.5 million**, with 5.7 million in the Metropolitan Area (IBGE, 2017). In the process of institutionalizing climate change policies, Belo Horizonte set the goal of reducing 20% of GHG emissions by 2030 in comparison to 2007.

BRAZIL



**COMMITMENT OF 37%
GHG REDUCTION
(2005 LEVEL)**



**2.5 MILLION
IN BELO HORIZONTE**



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FAHRRAD STRASSE

Fahrradstrasse in Belo Horizonte

Belo Horizonte has an innovative Sustainable Urban Mobility Plan, called PlanMob-BH, with comprehensive measures including TOD, BRT and Bike solutions. In September of 2013, Belo Horizonte formalized PlanMob-BH as a guide for improving mobility for the next 20 years. Belo Horizonte became the first city in Brazil to have a Sustainable Urban Mobility Plan with a long-term vision that links mobility to urban development goals (Secretariat Municipal de Governo BH, 2013).

The plan consists of elements such as an **integrated public transport network** composed of metro lines and a bus rapid transit (BRT) system with exclusive bus corridors; a bikeway network with the installation of protected bike lanes and a public bicycle sharing system; and a pedestrian facilities network. By 2030, the plan expects that the measures implemented contributes to reductions of 36% in GHG emissions, 25% in travel time and 19% in transport costs (Secretaria Municipal de Governo BH, 2013). A process of review and adjustment of the plan started in 2016 and was approved in 2017. The plan contains 176 measures to be implemented until 2030, from which 56% were already implemented until May 2018.

Beyond the immediate mobility related issues, Belo Horizonte also recognises these measures as an opportunity to **revitalise the downtown area** and enhance the quality of life by creating pedestrianised streets and giving the space back to people from cars.



**REVITALISING THE
DOWNTOWN AREA**



**INTEGRATED
PUBLIC TRANSPORT
NETWORK**

PLANNED ACTION

In this context, Belo Horizonte established a partnership with the city of Bremen, Germany to help BH in the implementation of a Zone 30 and a bicycle street (Fahrradstrasse). The main purpose of these measures is to increase the modal share of bicycle that at present represents only 0.4%. Belo Horizonte's Urban Mobility Plan has the goal to increase the bicycle trips to 6% by 2020. In order to achieve this goal, a programme that aims to promote the use of the bicycle as a mean of transportation, called PEDALA BH was created. The Zone

30 pilot-project foresees a wide deployment of vertical and horizontal signaling, reallocation and repositioning of parking spaces to provide the reduction of speed, and enlargement of sidewalks with the creation of small areas of coexistence for pedestrians with the insertion of urban furniture.

FAHRRADSTRASSE

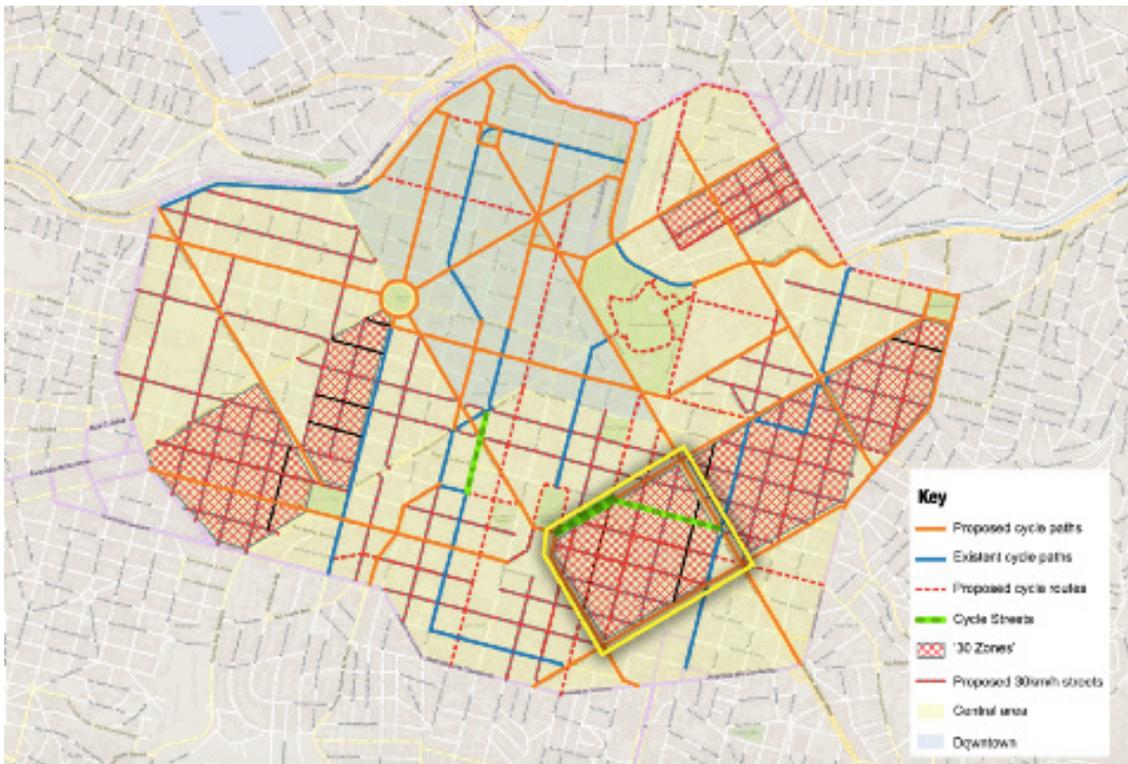


Figure 1: Proposal for the cycling network in Belo Horizonte and pilot project area

Until 2015, there were 70km of cycling infrastructure in the city. The plan aims at expanding it to a total of 411km by 2020. In this sense, the success of the pilot project would contribute to the replication of the initiative in other parts of city with the goal of reaching the 6% of bicycle trips target by 2020.

Belo Horizonte is really engaged to deliver the pilot-project of a Zone 30. BHTRANS already identified potential locations and are planning the implementation of the measure for this year. Figure 1 illustrates the map of the current Zone 30, Fahrradstrasse, bike lanes and bike paths, as well as the pilot-project of Zone 30 and Fahrradstrasse.

IMPLEMENTATION PLAN

Besides the Zone 30 and the Fahrradstrasse, BH-Trans has identified other actions and partners that will contribute to the implementation of Plan-Mob-BH. Here an overview:

- Implementation of MOVE BRT – Partnership with EM BARQ Brazil
- Urban logistics – Partnership with IFSTTAR
- Review of the PlanMob-BH – Partnership with Ruppert Consult
- Open data platform of urban mobility – Partnership with AustriaTech



Local & national frameworks to enable low-carbon urban energy, mobility & resource management systems

Legal Instruments

Brazil has a series of **legal instruments** in place to norm urban policy. For instance, the Federal Constitution of Brazil (1988) states that urban policy is the responsibility of the Municipality and must guarantee the social functions of the city and the development of citizens. It also establishes that the Municipal Master Plan is the basic instrument of urban territorial planning, and must define the use and occupation characteristics of each portion of the municipal territory, so that all properties fulfill their social function. In 2001, with the aim to regulate the Urban Policy chapter of the Constitution, the Statute of the City (Estatuto da Cidade) was approved. Its basic principles are participatory planning and the social function of property (Acioli, 2012).

Moreover, in 2012, the Ministries of Transport and Cities developed and launched the Sectorial Plan of Transport and Urban Mobility for Mitigation and Adaptation of Climate Change (PSTM). The strategy of the plan is to promote behavioral changes on travel patterns, by increasing share of public transport especially in major urban centers. The plan suggests four measures on how to achieve this. Cities must invest in:

- Infrastructure for urban mobility through public transport projects
- Urban planning through decentralization of the essential activities of the city and promoting service, study or leisure activities along public transport corridors
- Managing tools to improve urban mobility through regulatory and economic instruments to promote public transport and discourage individual motorized transport

BHTRANS

- Adoption of alternative vehicle technologies, focus on improving public transport

In Belo Horizonte, the Municipal Authority for Urban Policies is responsible for planning and managing urban projects like public infrastructure, housing, pavements, sanitation and transport. Under this Authority there is **BHTRANS** – „Empresa de Transportes e Trânsito de Belo Horizonte“, the public company responsible for urban transportation and traffic management in the city. BHTRANS plans, organises, guides, coordinates, executes, delegates and controls the delivery of public services related to urban transportation and road traffic, according to federal and state legislation, and it contributes to Belo Horizonte’s urban planning.

In order to monitor and evaluate the implementation of PlanMob-BH through specific indicators, the city created the Urban Mobility Observatory and the Mobility Council, two important tools of social control that are responsible for providing information and collecting civil society demands for improving mobility. The Observatory is composed of 63 institutions that collect information, define performance indicators and prepare annual reports on the implementation of PlanMob-BH.

Financing & Implementation options & partners

The city of Bremen has an extensive experience in prioritizing non-motorized transport through the implementation of safe infrastructure throughout the city. From the partnership with Bremen, Belo Horizonte is planning to invest on the implementation of a Zone 30 and on a Fahrradstrassen. The decision to implement a Fahrradstrasse is a result of the technical visit in Bremen in April of 2015. The main purpose of these measures is to increase the modal share of bicycle that currently represents 0.4%. PlanMob-BH has the goal to increase the trips by bicycle to 6% by 2020.

The Zone 30 for the pilot-project was defined during the visit of Mr. Michael Glotz-Richter in Belo Horizonte in March 2015. During the visit in Belo Horizonte a technical visit to the proposed Zone 30 was conducted in order to get feedback and the opinion from Mr. Glotz-Richter. The decision to include a Fahrradstrasse was made during the visit of Marcelo Cintra do Amaral and Eveline Trevisan in Bremen in April

Regarding the cost of the implementation, BHTRANS did a rough estimation for the investment on infrastructure and traffic signs for the pilot-project that will cost around EUR 90,000, and also has the cost for an extensive education campaign that BHTRANS estimates it will cost EUR 120,000. One of the main risks of the project is the lack of funding sources due to the current situation of extensive cuts in the city budget.



Zone 30 and Fahrradstrasse pilot project and increase its upscaling possibilities. These measures are:

LEARNINGS FROM THE PROJECT DEVELOPMENT

The political calendar

2016 was an electoral year in Belo Horizonte. Thus, Marcelo Lacerda, major of Belo Horizonte since 2009, postponed the implementation of the Zone 30 and Fahrradstrasse. This shows the importance of the political will and the political calendar in the implementation of the planned measures.

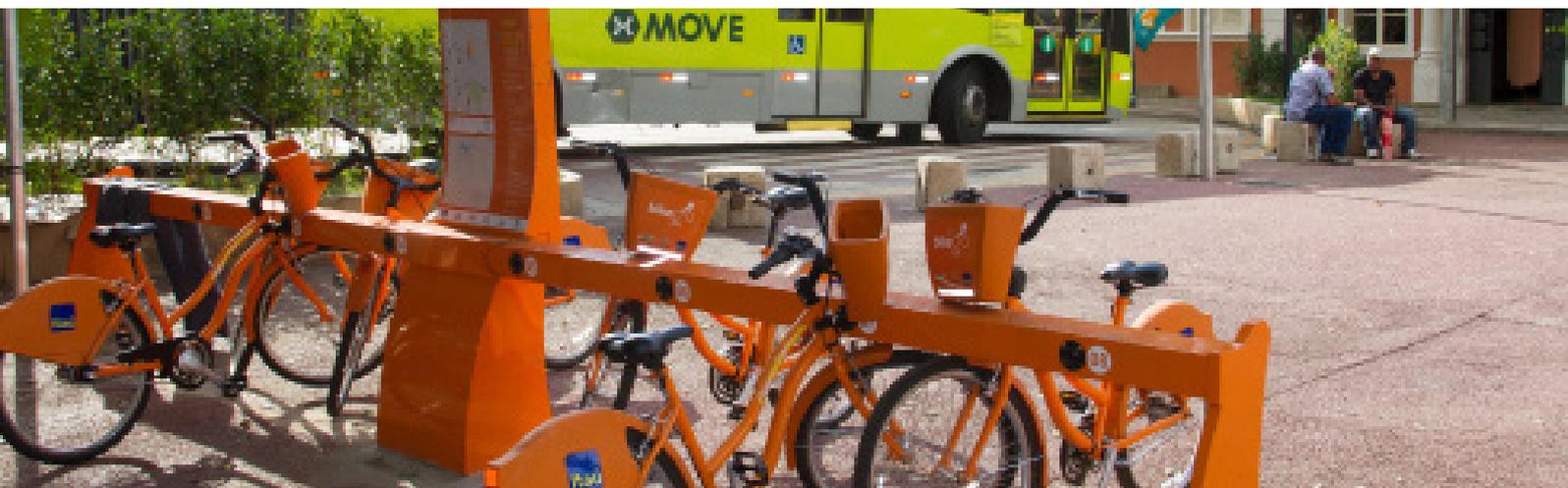
Nevertheless, the new elected major, Alexandre Kalil, who began his term of office in January 2017, decided to continue with the project despite of being from a different party. The implementation of a Zone 30 in 3 streets of the city centre of Belo Horizonte is planned for this year. The pilot will serve to evaluate the measures and define next steps.

The 4th Municipal Conference on Urban Policy of Belo Horizonte in 2014 approved the implementation of a Zone 30.

Belo Horizonte bike sharing system, called Bike-BH, is already in place with 40 stations and 400 bikes and 10.000 registered users.

Belo Horizonte already pedestrianized 2 streets in the downtown area. The new infrastructure also includes bicycle lanes and a terminal of BRT MOVE.

Federal financial resources through PAC (Growth Acceleration Program) were made available for the implementation of 150 km of bike lanes.





REFERENCES

Arioli, M. (2012, April 9). Estatuto das Cidades. Retrieved 20 June 2018, from <https://direitosurbanos.wordpress.com/2012/04/09/estatuto-das-cidades/>

Federative Republic of Brazil. (2015). Intended Nationally Determined Contribution towards achieving the objective of the United Nations Framework Convention on Climate Change (iNDC). Retrieved from <http://www4.unfccc.int/submissions/INDC/Published%20Documents/Brazil/1/BRAZIL%20iNDC%20english%20FINAL.pdf>

IBGE. (2017). Estatísticas por Cidade e Estado. Retrieved 20 June 2018, from <https://www.ibge.gov.br/estatisticas-novoportal/por-cidade-estado-estatisticas.html>

Secretaria Municipal de Governo BH. Plano Diretor de Mobilidade Urbana de Belo Horizonte - PlanMob-BH, Pub. L. No. DECRETO No 15.317 (2013). Retrieved from <http://portal6.pbh.gov.br/dom/iniciaEdicao.do?method=DetalleArtigo&pk=1106431>



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