

Belo Horizonte, Brazil

Partner city

Status of the project: Completed pilot project



Basic Information

Urban area: 14,420 km²

Population: 5,700,000 | Growth rate: 1.05%

Regional capital city

GDP per capita: USD 17,239

Modal Share:

Formal public transport: 28%

Walking: 35%

Cycling: 0.4%

Private cars: 33%

Motorcycle: 4%

National GHG emissions per capita: 5.12 (tCO₂eq)

Context

Belo Horizonte is the capital of the state of Minas Gerais and is located in the south-eastern region of Brazil. It is the third-largest metropolitan area in the country and has a population of over 2.4 million, with 5.7 million in the official Metropolitan Area (IBGE, 2014). Considering the rather moderate ambition level of Brazil's NDC, local action in cities plays a crucial role for climate change mitigation. Belo Horizonte is one example of an active mid-sized city committed to sustainable development.

In its NDC, Brazil commits to reducing greenhouse gas emissions by 37% below 2005 levels by 2025. The NDC also contains a subsequent indicative contribution to reduce greenhouse gas emissions by 43% below 2005 levels in 2030. Compared to the 1990 level, this translates to 6% respectively 16% reduction. With this target, Brazil is the first major developing country to commit to an absolute GHG reduction below 1990 levels.

Belo Horizonte has a series of plans (Master Plan, PlanMob-BH, Belo Horizonte – a Smart City, etc.) and policies in place that are reviewed and monitored on a regular basis to help guide the urban development of the city. Belo Horizonte has already made important progress towards sustainability and in the medium and long run, envisions becoming an example of smart and sustainable urban development for Brazil and Latin America. However, road transport remains responsible for 53% of greenhouse gas emissions in Belo Horizonte and could reach 6 million tons of CO₂ emissions by 2030. With regard to mobility, Belo Horizonte already has an innovative Sustainable Urban Mobility Plan (2010, reviewed in 2016), called PlanMob-BH, with comprehensive measures related to eight strategic areas: (1) active mobility, (2) collective mobility, (3) motorised individual mobility, (4) traffic calming and circulation, (5) urban logistics, (6) sustainable city, (7) universal accessibility, and (8) management, supervision and operation. Each strategic intervention is complemented by actions and indicators for short (2020), medium (2025) and long-term (2030) planning horizons.

Since 2017, Urban Pathways has been supporting Belo Horizonte in the implementation of active mobility projects. For this, Urban Pathways has invited the city to participate in several international fora, trainings, and peer-to-peer learnings. Moreover, Urban Pathways has provided technical assistance in the development of project proposals to be submitted to donors. As a result, in 2019, Belo Horizonte implemented four "Zones 30", one of which counted on the support of Urban Pathways from conceptualisation to financing, namely "Zone 30 Confisco". The successful implementation of Zones 30 in Belo Horizonte has led to political support and great acceptance from the citizens.

The Zone 30 pilot-project foresees a wide deployment of vertical and horizontal signalling, the reallocation, and repositioning of parking spaces to encourage a reduction in the speed, and the enlargement of sidewalks, including the insertion of urban furniture, hereby creating small areas of coexistence for pedestrians. 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 pedestrian streets and giving the space used for cars back to the people.

In terms of capacity building, Urban Pathways involved Belo Horizonte in webinars on e-scooters, tactical urbanism, public space interventions, AQ sensors, etc. Urban Pathways also supported the participation of Belo Horizonte in the Transport and Climate Change Week 2018 and 2022 (Berlin), the Sustainable Urban Infrastructure Forum (Quito), the International Conference on Climate Action 2019 - ICCA (Heidelberg), and, among others, a site visit to Santiago de Chile (2020). Thus, Urban Pathways would like to continue supporting Belo Horizonte in the development of active mobility projects, awareness raising, and cross-sectorial integration related to climate change mitigation.

Support from the Partnership

Technical assistance: Pilot Project development

Funded by: BMU through the International Climate Initiative (IKI), WRI Brasil, TUMI

Funding amount: EUR 100,000

Implemented by: Wuppertal Institute and UN-Habitat through the Urban Pathways project

Local counterpart: Belo Horizonte Transport and Traffic Company (BH-TRANS)

Supported activities:

- Pilot project financing and implementation
- Capacity building, training, and participation in international fora
- Assistance in the development of project proposals for donors

Status of implementation

Project start: 2017

Project completion: 2022

Completed outputs:

- Pilot project implementation of Zone 30 in the Confisco neighbourhood
- Pilot project implementation of the EcoZone in the Santa Tereza neighbourhood
- Capacity building and webinars on e-scooters, tactical urbanism, public space interventions, AQ sensors

Insights from practice: key pilot project takeaways

The necessity of a pilot project as a first step for implementing zone 30 in Belo Horizonte

The pilot project, implemented in the Confisco neighbourhood since 2019, aimed to create a low-cost Zone 30, increase safety around the school area, and enhance social cohesion in the neighbourhood. The positive results of the project, including increased public perception and city-wide replication, have led to the institutionalisation of this type of intervention in Belo Horizonte. Despite the success of the pilot project, there is still room for improvement in the intervention strategy and specificity of project results. Possible improvements include addressing measurement errors, increasing assessment days, and incorporating awareness-raising activities related to waste.

Incorporating sustainability and awareness-raising activities in future urban intervention projects: Insights from the Confisco Zone 30 pilot project

The pilot project showed that community participation, before and after assessments, and inter-institutional cooperation, are crucial elements for the success of an urban intervention project like the Confisco Zone 30. The positive results of the project, such as increased safety around the school area and social cohesion in the neighbourhood as well as the public's positive perception, have led to the institutionalisation of this type of intervention in Belo Horizonte. BHTrans is now creating a Zone 30 guide to help replicate this success city-wide.

The pilot project also revealed that there is still room for improvement in the intervention strategy and specificity of project results. For example, the results of the Smart Citizen Kit did not exhibit the desired results during the mobility week, and the relative numbers of pedestrian and cyclist counts hardly exhibited any difference in mobility behaviour in the surroundings of the school. To address these issues, covering a longer period of time before and after the intervention and increasing assessment days could help reduce data biases and measurement errors.

Finally, some elements that could be included in future urban intervention projects were identified, such as the fabrication of urban furniture with local partners using recycled materials and the inclusion of awareness-raising activities related to waste. The Confisco Zone 30 already incorporated some of these elements, but further attention to these topics could improve the success of future projects. Overall, the pilot project provided valuable insights into what works and what could be improved in urban intervention projects, serving as a model for future initiatives.

Results and perspectives for scaling

Belo Horizonte's Model for Safe and Sustainable Mobility: A Blueprint for Cities Worldwide?

While the project's specific implementation may not be directly replicable in other locations, the project's emphasis on community engagement, inter-institutional cooperation, and low-cost interventions can serve as a model for similar projects around the world. The creation of a Zone 30 guide can be a valuable tool for other cities interested in pursuing similar initiatives.