



Belo Horizonte

Since 2017 Urban Pathways has been supporting Belo Horizonte, the third largest metropolitan region in Brazil, in the implementation of active mobility projects. For this, UP has invited Belo Horizonte to participate in several international fora, training and peer-to-peer learning. Moreover, UP 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 with the support of UP from conceptualization to financing, the Zone 30 Confisco. The successful implementation of Zones 30 in Belo Horizonte has led to a great acceptance from citizens and political support. Thus, UP 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. For the latter, several discussions and activities related to waste management have already been carried out with the city and will be integrated in the implementation of the EcoZone in the Santa Tereza neighbourhood.

Pilot and Demonstration Action

The Zone 30 implementation in the Confisco Neighbourhood

During September and October 2019, BHTRANS with the support provided by the Wuppertal Institute, UN-Habitat and WRI Brasil in the context of the Urban Pathways project and its environmentMentalise Initiative carried out various activities for the implementation of a Zone 30 in the surroundings of the Anne Frank Municipal School in the Confisco neighbourhood. The Confisco neighbourhood is located in the Pampulha administrative region, a peripheral area of Belo Horizonte. The aim of the project was to increase the road safety around the school and raise awareness among the students and the local community about climate change related topics such as sustainable urban mobility and waste management.



The success of the project relies on 3 key elements, i.e., community participation, inter-institutional cooperation and before and after assessments, which included vehicles and pedestrian counts, surveys, AQ monitoring and . The overall results of the project are a low-cost Zone 30, where the safety around the school area and the social cohesion in the neighbourhood are increased.

Moreover, the positive perception from the public, 78% of the residents would like the intervention to become permanent, and the visibility that this and the previous zone 30 projects have achieved, have led to the institutionalisation of this type of interventions and its city-wide replication in Belo Horizonte. At present, BHTrans is in the process of elaborating a Zone 30 guide that will explain step by step all the elements and stakeholders that need to be considered for a successful implementation. For this purpose, the institution will create a dedicated team that will have the replication of Zones 30 in the city as its main task.

Budget: 8,363 EUR

Outcomes

- Number of direct beneficiaries: 1,000 students of the Anne Frank Municipal School
- Pedestrians increase in the area: 23%
- Estimated direct CO2 emissions reduction: 1.2 tCO2/year

Air Quality sensing powered by Citizen Science

In October 2019 the FabLab Newton Paiva was identified as the best local partner to implement the AQ sensors assembly workshop. FabLAB Newton is a MIT-accredited laboratory with digital (computer-aided) manufacturing equipment for the design and prototyping located at the Newton Paiva University in Belo Horizonte. FabLAB Newton, launched in October 2015, is an academic FabLab and the first one in the city.

After several online meetings and the shipment of 6 assembly kits, in February 2020, open-seneca provided a virtual seminar to FabLab Newton to explain them step by step how to build the AQ measuring devices, so that they could replicate the workshop on

site with the cyclist association BHemCiclo. The on-site workshop was planned for March 15th, but given the COVID-19 situation, the workshop was postponed. Moreover, the FCA Group, which has an assembly plant in Belo Horizonte has shown interest in purchasing additional 100 kits for local assembly as part of their community education program. Such a development could expand the city's AQ monitoring network significantly.

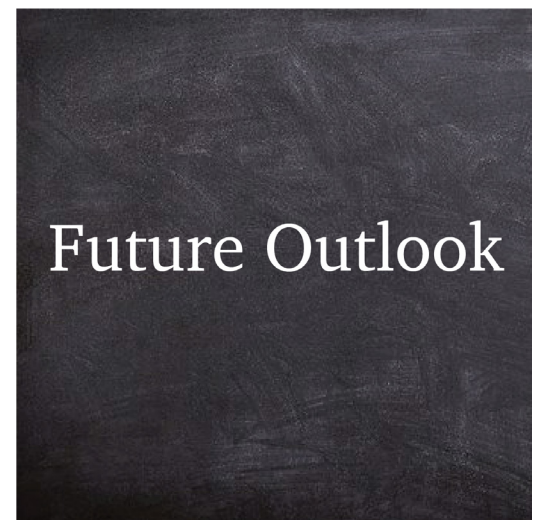
Budget: 655 EUR



Fleet renewal of diesel by electric buses

Understanding the importance of implementing sustainable mobility solutions in a city with one of the highest motorisation rates in Brazil and where 53% of the GHG emissions come from road transport, in 2010 Belo Horizonte approved an innovative Sustainable Urban Mobility Plan, called PlanMob-BH.

In December 2015, BHTrans tested a BYD electric bus on two routes of public transport. During the tests, BHTrans directors and technicians evaluated the safety and comfort aspects for users and drivers. The bus is 100% electric, powered by iron phosphate batteries, and can be charged in only five hours. The electric bus is already being manufactured in Brazil, where it has been tested in public transportation lines in many cities, including São Paulo (SP), Porto Alegre (RS) and Campinas (SP) (BHTrans, 2015).



In the first phase, the goal is to include at least 25 electric buses in the conventional bus service funded by international resources. This project, which was submitted with the support of UP, was one of the 20 finalist cities (from the 140 that submitted an application) of the Global Climate City Challenge, a joint initiative of the Global Covenant of Mayors (GCoM) and the European Investment Bank (EIB). Belo Horizonte was not selected for the next phase. Thus, it is actively looking for further financing sources to fund its 25 first electric buses.

Estimated budget: 3.6 million EUR

Estimated GHG emissions reduction: 1,888 tCO₂/year

EcoZone Santa Tereza - Low-emissions and Zero waste in one of the most traditional neighbourhoods of Belo Horizonte

Using the example of the Confisco Zone 30 implementation, this project seeks to work with the community in Santa Tereza to promote local actions capable of generating changes in the mobility choices and public space occupancy, as well as including sustainable waste management practices in a more integrated and structured way. The development of a pilot EcoZone that merges the concepts of Low-emission Zone (LEZ) and Zero Waste could become a precedent for Belo Horizonte that could easily be replicated in other areas of the city and thus contribute significantly to GHG emissions reductions from the transport and waste sectors.

In this context, the EcoZone Santa Tereza Project will carry out actions to improve the connectivity, walkability and road safety in the area through the implementation of Zones 30 in two schools surroundings and other important places of the neighbourhood, such as the main square. UP will work together with BHTrans, the Municipal Program Escola Segura, WRI Brasil and the local NGO NossaBH in the creation of Zones 30 in the selected areas and conduct the corresponding awareness raising activities with the students of the selected schools and the local community. Moreover, the project will cooperate with Lixo Zero and the Municipal Program EcoEscola to increase the amount of families and businesses in the neighborhood that separate at source. For four years, the EcoEscola BH Program has been developing actions to encourage and strengthen environmental education in municipal schools in Belo Horizonte. The program includes school environmental education (formal) and non-school environmental education (non-formal) on a permanent, continuous basis, articulated with the community, integrating the different sectors of the school, the government and society through educational processes. These are projects such as urban gardens, composting, tree planting, conscious use of water and gardening projects in schools. In 2019, there were more than 321 schools engaged.

Estimated budget: € 30,000

Estimated direct GHG emissions reduction: 42 tCO₂/year

Agroecology and Well Being: Waste Management and Urban Agriculture in Belo Horizonte/Brazil

The Agroecology and Well-being project aims to reduce GHG emissions and to contribute to the social cohesion, safety and liveability in neighbourhoods, through complementary solutions for decentralized waste management, developing social technologies that will provide better living conditions, as well as collaborative and innovative actions. This project is designed to integrate practically and effectively several local initiatives with a focus on sustainable development. Its implementation will enable integration of these groups and organizations with the communities involved for the creation of Eco-zones, to tackle two of the main problems in the urban context and significantly contribute to not only reducing GHG-emissions, noise and air pollution. With this, actions of the inclusive and circular local economy will be put into practice, expanding alternatives for more sustainable consumption in Belo Horizonte.

Residents of the target neighbourhoods of Belo Horizonte, which together have a population of more than 320 thousand inhabitants, will be beneficiaries of the project and will actively participate in the project by: taking or delivering their recyclable organic and dry residues to the groups; consuming agroecological foods produced by urban farming groups and family members; and participating in training and communication actions. It is estimated that 300 people will participate in training activities, including urban women farmers, waste pickers, students and teachers, entrepreneurs, traders, representatives of the government and civil society.

The concept was submitted to the IKI small grant call in the beginning of 2020.

Estimated budget: 60,000 EUR

Estimated direct GHG emissions reduction for waste management: 6,928 tCO₂

Building Green Infrastructure: Restoration of Landfills in Public Parks

The scope of this project is the rehabilitation and restoration of an area that was used to dispose of solid urban waste, becoming a large ecological park, promoting the inclusion of communities directly affected by landfill operations in the revitalization project, contemplating what was advocated in the environmental perception study.

The project aims to:

- (i) contribute to improving the quality of life and microclimate and
- (ii) effect cultural rescue; for the surrounding population, as well as for native fauna and flora.

The transformation of the area into a public park, which will have spaces for equipment, leisure areas, green areas and environmental education areas, to be appropriated by the community - safeguarding the rules and restrictions for their use. Its development is in line with the policies and plans that guide the solid waste sector, which include: the National and State Solid Waste Policy (Federal Law No. 12.305 / 2010) and its regulation, the Comprehensive Urban Plan of the Municipality of Belo Horizonte (Law No. 7,165 / 1996), and the Municipal Plan for Integrated Solid Waste Management of Belo Horizonte - PMGIRS-BH.

The proposed project concept was submitted in January 2020 as a part of ICLEI - Transformative Actions Program (TAP).

Estimated budget: 2.8 million EUR

Estimated direct GHG emissions reduction for waste management: 1,066,058 tCO₂

Implemented by:



In cooperation with:



Supported by:



based on a decision of the German Bundestag