

Building a Green Jobs Corps for Equitable Environmental Planning in Belo Horizonte

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City Population	2,530,701
City Area	331,354 km ²
City GDP	84.8 billion USD
Climate Zone	Cwb (subtropical highland)
ARC3.3 Linkages	Governance, Enabling Policy Environments, and Just Transitions



Figure 1. *Belo Horizonte cityscape.*

Introduction. This case study will analyze the potential for building a green job corps in Belo Horizonte, Brazil’s sixth largest city and the capital of the State of Minas Gerais, as an actionable strategy for the successful future of environmental planning (Brazilian Institute of Geography and Statistics, 2023). As of 2023, the city was third in Brazil for total gross revenues realized (Brazilian Institute of Geography and Statistics, 2023). Belo Horizonte’s Gini Coefficient is 0.545 (Mourao & Junqueira, 2021); the employment rate in 2022 was 69.43% (Brazilian Institute of Geography and Statistics, 2023), and the unemployment rate for the state of Minas Gerais was 11.5% as of March 2020, as compared to the national unemployment rate of 6.4% in 2024 (CEIC, 2020; Brazilian Institute of Geography and Statistics, 2024).

Belo Horizonte has undergone rapid, often unplanned urbanization: 25% of the population, or roughly 570,000 people, live across the city’s 324 informal settlements or favelas (Caldas Fernandes, 2019). In 2016, the Climate Change Vulnerability Assessment of Belo Horizonte enumerated landslides, floods, dengue epidemics, and heat waves as the city’s most significant climate risks, outlining 144 high flood risk hotspots and an increase in heavy rainfall events by 32% due to climate change (Bittencourt et al., 2018). The report also indicated that many of the most vulnerable areas are low-income informal settlements with low adaptive capacity due to poor living conditions and lack of access to jobs and services (Bittencourt et al., 2018). The vulnerability assessment highlighted the most impacted parts of the city due to rising temperatures and calls for the need of targeted adaptation interventions, as well as the creation of a Climate Change Adaptation Plan based on the assessment (Bittencourt et al., 2018).

Current Climate Actions. Belo Horizonte has numerous plans and policies in place that guide the city’s climate mitigation and adaptation strategies. These include the Plan to Reduce Greenhouse Gas Emissions (PREGEE), the Master Plan for Sustainable Urban Mobility (PlanMob-BH), and the Environmental Recovery Program of Belo Horizonte (DRENURBS), supported mainly through the Municipal Committee on Climate Change and Eco-Efficiency (CM-MCE) and the Municipal Environmental Council (COMAM) (Prefeitura de Belo Horizonte, 2025; Prefeitura de Belo Horizonte, n.d.). The city aimed to unify and build upon these climate initiatives with the launch of its 2022 Local Climate Action Plan (PLAC-BH), which establishes a new framework for reducing greenhouse gas emissions and adapting to climate change while promoting equitable socioeconomic development (Prefeitura de Belo Horizonte, n.d.). The PLAC-BH outlines 16 climate actions along three strategic axes: More Voices, Less Inequalities; More Life, Less Vulnerability; and Greener, Less Emissions (Prefeitura de Belo Horizonte, 2025; Prefeitura de Belo Horizonte, n.d.).

The actions encompass numerous measures to reduce greenhouse gas emissions from various sectors - including transportation, energy, building, waste management, and land use - through energy efficiency upgrades and the adoption of renewable energy, such as solar, wind, and biomass. The actions also emphasize sustainable and adaptive urban planning practices including restoration of natural

stream beds, expansion of preservation areas and green corridors, execution of macro- and micro-drainage projects, and overall expansion of green infrastructure and ecosystem restoration through urban afforestation and nature-based solutions via programs like Trama Verde e Azul (Green and Blue Networks) (Prefeitura de Belo Horizonte, n.d.).

The Plan also generally promotes collaboration between the private, nonprofit, and civil society sectors. The PLAC-BH includes some policies and initiatives to support training for green jobs, which are defined as, “decent jobs that contribute to preserve or restore the environment, be they in traditional sectors such as manufacturing and construction, or in new, emerging green sectors such as renewable energy and energy efficiency” (International Labour Organization, 2016). Such green job training includes courses for the private sector, climate training for municipal agencies and tourism workers, agroecology training, and five vacancies in training courses for local communities for related infrastructure work, and a note on including and promoting the training of those from vulnerable groups, like women.

However, while its proposed policies and initiatives aim to stimulate green job development, the plan contains minimal training commitments and does not include explicit commitments to job creation; in particular, it does not tie green skills training or job placements to the promotion of socioeconomic mobility for vulnerable low-income communities (Prefeitura de Belo Horizonte, n.d.).

New Master Plan. The PLAC-BH often ties its initiatives to the New Master Plan of Belo Horizonte, enacted in 2019, which established goals for the enactment of urban-environmental sustainability measures, economic diversity, and fair distribution of economic benefits from public investment and urbanization (Caldas Fernandes, 2018). Several of the Plan’s strategies toward these ends involve the development and restoration of green infrastructure like parks, gardens, urban forests, and preserved areas; the development of buildings in accordance with new resilience and sustainability measures including the “Sustainable BH Seal,” and the expansion of sustainable public transit to support accessibility for low-income communities to economic opportunity (Caldas Fernandes, 2018).

However, like the PLAC-BH, while the Master Plan aims to promote job creation and improve quality of life for vulnerable residents, it does not outline explicit green job training or placement initiatives targeted to support those communities. Hence, there is an opportunity for the City of Belo Horizonte to take a more intentional approach to centralizing and scaling green jobs training for vulnerable populations, especially low-income residents living in favelas (informal settlements), by coordinating partnerships between existing job training organizations, business unions, and municipal agencies leading the implementation of PLAC-BH and Master Plan initiatives.

Green Job Training - Progress and Gaps. There are several non-governmental organizations (NGOs) and labor unions that provide green job training in sustainable planning, green construction, and environmental restoration in Belo Horizon-

te, some of which specifically target training programs to vulnerable residents. These include the Municipal Secretariat of Economic Development’s Qualifica program (Prefeitura de Belo Horizonte, 2024) as well as programs led by Instituto Guaicuy (Instituto Guaicuy, n.d.), Instituto Sustentar (Instituto Sustentar, 2016), Rede Cidadã (Rede Cidadã, n.d.), NossaBH (Nossa BH, n.d.), Sindicato dos Trabalhadores nas Indústrias da Construção Civil de Belo Horizonte (Sinduscon, n.d.), and Federação das Indústrias do Estado de Minas Gerais (FIEMG, n.d.). Additionally, several unions sit on the Municipal Council of the Environment and are partnering with the City to implement various initiatives in the PLAC-BH and Master Plan (Prefeitura de Belo Horizonte, 2025).

However, existing green job training initiatives are operated independently and the City has not indicated efforts to tie them directly to the implementation of the PLAC-BH or Master Plan. By leveraging existing efforts and building more targeted partnerships between NGOs, unions, and municipal agencies, the City of Belo Horizonte could coordinate a cross-sector effort that drives and maintains accountability to the implementation of the climate commitments set forward in the PLAC-BH and Master Plan, while connecting its most vulnerable residents to economic opportunity and mobility. In turn, the city could attract additional investment to its climate action strategies and build its leadership on a national and global scale as a green economy.

Cross-Sector Alliance for Equitable Climate Jobs Development. Such an initiative could be framed as a small-scale and more targeted pilot akin to the U.S. BlueGreen Alliance, a coalition of over 200 member organizations (representing over 10 million workers) which partners labor unions and environmental organizations to generate good quality green jobs that advance clean infrastructure and renewable energy through programs like workforce training, transition assistance, and job placements (BlueGreen Alliance, n.d.). Several steps would be involved in establishing and implementing such an enterprise in Belo Horizonte. First, the city could conduct a needs assessment alongside the actions and indicators set forth in the PLAC-BH and Master Plan to identify how many jobs will be needed to execute each planned action and which skills will be needed. The program would also map those needs in existing green job training programs to understand which ongoing efforts are already set up to potentially provide the training and job placement necessary.

Second, the City would need to formally establish partnerships between job training groups, municipal authorities managing each relevant climate action or program, and local or State unions to mobilize the necessary resources and commitments toward designing and implementing the training program. Target agencies could include the Municipal Environment Department, Municipal Department of Works and Infrastructure, and Municipal Department of Urban Policy, which all play leading roles in core components of the PLAC-BH and Master Plan (Caldas Fernandes, 2018; Prefeitura de Belo Horizonte, 2025; Prefeitura de Belo Horizonte, n.d.). This partnership step could also include developing a curriculum that tailors green job training programs to the needs of vulnerable groups in terms of physical accessibility, resources, and learning capacities.

Next, the City could take the program further by committing to a certain percentage of job placements for vulnerable residents (much more specific, and much higher, than is currently committed in the PLAC-BH and Master Plan), and work with program partners - especially unions - to help trainees find employment in direct connection to implementation of PLAC-BH and Master Plan climate actions. Finally, and ideally, the program would include a monitoring and evaluation component to track the effectiveness of training and job placement programs and the socioeconomic benefits resulting from the program for vulnerable residents.

Financing. To finance the program, the City could look to its pre-existing international funding partners with aligned interests. For example, the World Bank and Global Environment Facility have invested \$200 million (World Bank Group, 2013) and \$25 million (Global Environment Facility, 2006) in Belo Horizonte since 2000, respectively, while the Inter-American Development Bank has invested at least \$55 million in the city (Inter-American Development Bank, 2013). These investments went to a wide range of climate mitigation, adaptation, small business development, and participatory sustainable development initiatives, suggesting these groups could be interested in investing in the type of program outlined above. Similarly, the State-run bank Caixa Econômica Federal, which disbursed over 3 million Brazilian reais in 2023 directed towards forest and stream recovery, could be interested given the targets of their 2023 Sustainability Report include investing in Social Responsibility and Environmental and Climate Responsibility (CAIXA, 2023).

Expanding Global Leadership. This initiative could build on the motivation behind Belo Horizonte's famed cooperative waste collection program, which partners the city's Superintendência de Limpeza Urbana de Belo Horizonte with the local waste pickers' cooperative, the Associação dos Catadores de Papel, Papelão e Material Reciclável de Belo Horizonte, to employ low-income families in waste cleanup and recycling (Centre for Public Impact, 2016). This program is viewed as a global model for sustainable waste management, as well as a new green jobs creation program for low-income residents that similarly partners city agencies, unions, and NGOs to serve both Belo Horizonte's environment and its most vulnerable populations. This could expand the city's climate leadership on the global stage by ensuring its climate adaptation and mitigation plans are both effective and inclusive.

Further Research. More research would be needed to inform the proposed program's development and to support its success. First, additional inquiry is required into the number of jobs the city aims or anticipates to create through the PLAC-BH and Master Plan. Then, more data is needed on the outcomes - e.g., how many jobs have been created, how many people (especially from low-income communities) have been trained - of existing green job training programs led by local NGOs, unions, and municipal agencies to understand the potential this type of program could have for meeting the number of green jobs projected for the PLAC-BH and Master Plan. This would also inform what types of enhancements are needed to scale up, coordinate, and en-

hance existing programs so they can more effectively fill job gaps. Additionally, more transparency is needed around what types of job training and placement programs the city has already initiated to implement its PLAC-BH and Master Plan. Finally, further investigation into the education, skills, and employment levels of favela communities, and a participatory process to gather input from favela residents, would likely be necessary to ensure this initiative truly reaches and serves vulnerable and historically disadvantaged residents.

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Additional Data

- **Population Density:** 7,300 people/km²
 - **Per Capita Gross National Income (GNI):** 9,950 USD (Upper-Middle Income) [2024]
 - **Gini Coefficient:** 52 [2022]
 - **Human Development Index (HDI):** 0.786 (High) [2023]
 - **Type of Climate Intervention:** Hybrid (Adaptation and Mitigation)
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