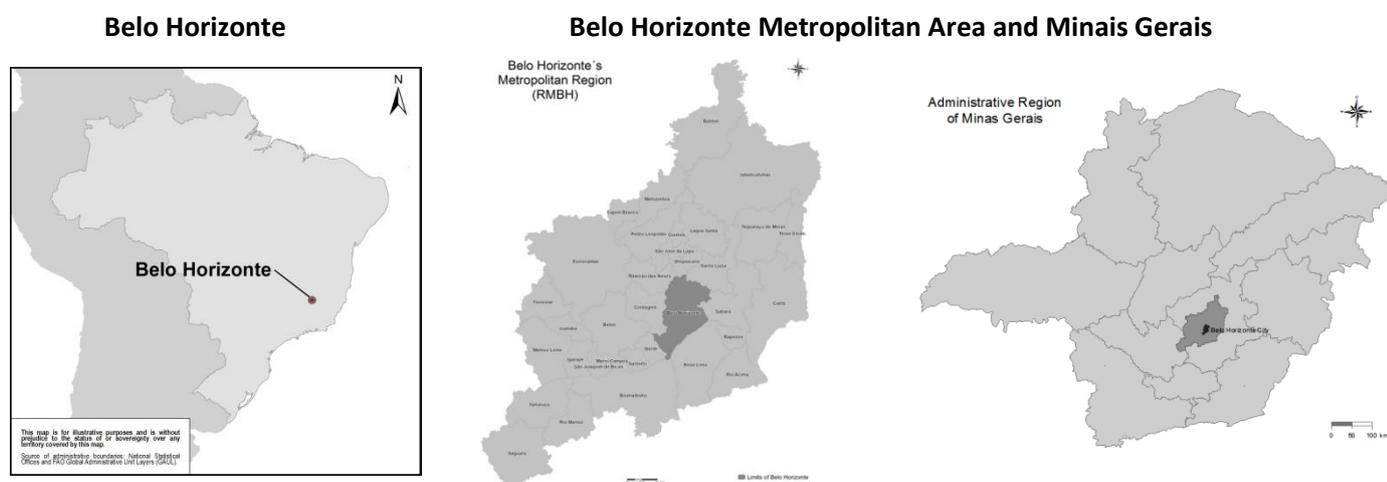


# BELO HORIZONTE, Brazil

## Overview of Belo Horizonte



Source: Municipality of Belo Horizonte, created in April 2016 by GGEOP/SMAPU/SMDE.

## Belo Horizonte's administrative structure

Belo Horizonte is at the core of a metropolitan area of the same name Região Metropolitana de Belo Horizonte (RMBH). The metropolitan area comprises a total of 34 municipalities.

## Key figures

	Population (2010)	Unemployment rate (2010)	Contribution to GDP
<b>Belo Horizonte</b>	2 375 151	7.6%	17% of the Minas Gerais state's GDP (2013) 43% of the Metropolitan area's GDP (2012)
<b>Brazil</b>	190 732 694	6.7%	-

## Challenges for Belo Horizonte's resilience

- *Low-income inhabitants are more vulnerable to floods and landslides in the territory of Belo Horizonte and its neighbouring municipalities*

Between 1991 and 2010, landslides or floods impacted more than 500 000 residents in the city and its neighbours. High population growth in the 1960s led to rapid urban growth and polarised the wealthy and poor areas. Many residences were established in hazard-prone areas which correspond to 0.45% of all municipal households, 24.5% of which were in low-income neighbourhoods. Considering that 17% of all the households are located in low-income neighbourhoods, the strongest impacts were felt by low-income segments of the population, who lived on hills, river shores and other vulnerable areas. Indeed, in the urbanised metropolitan area, areas of informal settlements have suffered extensively from the erosion of land because they are often built on steep slopes, in embedded valleys and concave surfaces, where the risk of landslides is higher.

## *Elements for building resilience in Belo Horizonte*

### **Economy**

- *Belo Horizonte has diversified its economy* for the last 40 years and shifted from an extractive to a knowledge and service-based economy which decreased economic vulnerability to natural hazards.

### **Society**

- *Belo Horizonte has invested in social inclusion policies* to reduce the number of low-income neighbourhoods, such as the “Vila Viva” programme.
- *Belo Horizonte has active citizens’ networks in disaster risk reduction.* 60 geological risk and flood risk volunteer groups make up the community and a partnership between the municipal civil protection service and local universities allows engineering students to volunteer in preventive inspections.

### **Environment**

- *Belo Horizonte has implemented a mix of measures for the mitigation of geological risks*, including a creek restoration programme called “DRENURBS”, the “Structural Programme in Risk Areas (PEAR)”, and inclusion of risk management decisions in territorial planning policies such as the Master Plan.

### **Institutions**

- *Belo Horizonte has developed a whole-of-society approach for disaster risk management*, defined in the Master Plan of Civil Defence and sets up the “Executive Group of Risk Areas (GEAR)” that brings together public managers and private companies whose activities relate to risk prevention and emergency response.
- *Collaboration with different levels of governments is promoted*, for instance with the “Minha Casa Minha Vida” programme that relocates low-income families living in prone-risk areas to apartments built by the municipality.
- *Citizens participate in disaster risk reduction policy making* by being involved in regional participatory budgeting processes for instance. Reference centres in risk areas (CREAR) have also established participatory plans with local population in order to identify

### **Conclusions**

- The municipality has established a mix of structural and non-structural measures for the prevention and mitigation of natural hazards. The efforts to reinforce structures in informal settlements as well as removal of the population in cases of extreme risk are particularly noteworthy. The municipality has incorporated safety and security of the residents into regulations for land use with a view to reduce the number and population of informal settlements in hazard-prone areas, and going forward the challenge will be to implement these measures.
- The municipality has developed a strong network of citizens, which works in partnerships with local universities to contribute to the management of disaster risks. Citizens exposed to natural hazards are actively engaged, and this direct contact improves knowledge sharing about local hazards and contributes to a whole-of-society approach to risk management.
- The municipality has successfully shifted from an extractive-based economy to a service-based one. While these activities may be less directly exposed to natural hazards, they are heavily dependent on utilities and core services such as electricity, gas, telecommunications and water. Lead municipal departments responsible for each infrastructure sector should produce sector resilience plans such as business continuity plans on an annual basis, alerting the city to any perceived vulnerabilities and setting out an action plan where necessary.
- Belo Horizonte has achieved an interagency approach to civil defence, which includes participation from all departments. There is a shared responsibility for risk prevention and mitigation across different departments. To strengthen policy coherence, Belo Horizonte should establish a risk registry that compares the relative likelihood and impacts of different types of risks, and use this as a planning tool to set priorities for risk prevention and mitigation across departments.