

# Fighting hunger locally, from the ground up

Commended by the United Nations, a Brazilian city's crisis response linked all aspects of food security. **By Anita Makri**

Long before 'buy local' became a focus of global food-policy discussions, the Brazilian city of Belo Horizonte was ahead of the game. In the early 1990s, many of its 2.5 million citizens were struggling as a national economic crisis sent food prices skyrocketing. An estimated 38% of families in the city were living below the poverty line and 18% of children under three were malnourished.

That changed under the administration led by Patrus Ananias de Souza of the left-wing Workers' Party, who was elected as mayor in 1992. He established a new department, known today as the Secretariat for Nutrition and Food Security, which overhauled food security and nutrition policies, putting governance at a local, rather than federal, level.

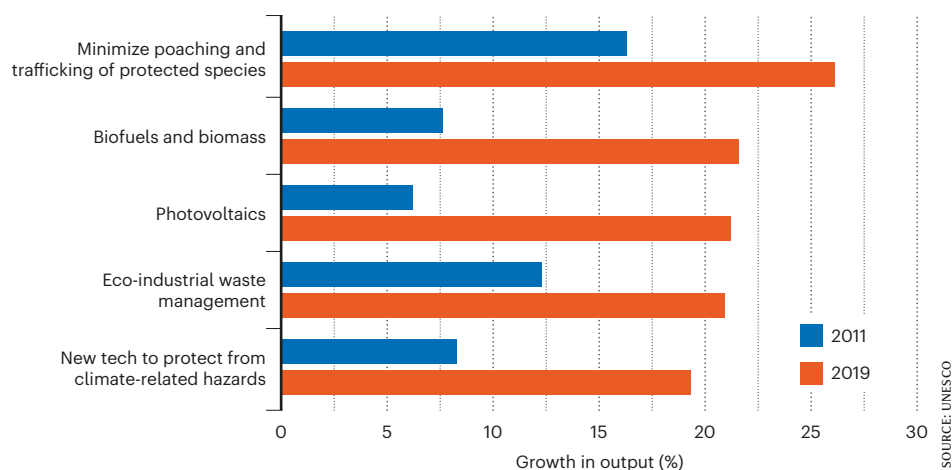
Predicated on the tenet that access to food is a basic human right, the department formed a 20-member council, with representatives from industry and consumer groups, research institutions, churches, civil society and municipal, state and federal government sectors.

In 1993, it launched the Belo Horizonte Food Security Program, a plan that encompasses 20 interconnected initiatives related to food production and distribution, including supporting urban agriculture through subsidies and equipment supply, regulating prices in food markets, providing free meals in every public school and running public nutrition education campaigns. Bus-stop posters, for example, compared supermarket prices to highlight the most affordable options.

In addition to initiatives to promote better awareness about nutrition, over time the city has also established programmes that encourage exercise and other aspects of healthy living. Mariana Souza Lopes, a nutritionist at the Federal University of Minas Gerais (one of four

## SUSTAINABLE LIVING

The top five topics by increase in the share of global output from lower middle-income economies, according to the 2021 UNESCO Science Report. Using the Scopus database, the report mapped publications from almost 200 countries in total for 2011–19 on 56 research topics relevant to the UN's 17 SDGs.



SOURCE: UNESCO

academic institutions in Belo Horizonte), says the city uses the Health Vulnerability Index (HVI), a database that draws on a range of socioeconomic variables, to identify priority areas for new projects and resource allocation.

"Some programmes, such as the Health Academy Program (HAP), were implemented as a priority in areas of high HVI," says Lopes. HAP offers a service to eligible adults of daily physical exercise supervised by a professional. "It is perhaps one of the largest physical activity incentive programmes in the world," says Lopes.

## Major impact

Belo Horizonte's commitment to improving access to food and education around healthy living has had a major impact on its residents' lives. Extreme poverty rates fell from 17.2% in

1991 to 5.6% in 2010. Infant and child mortality rates more than halved in the same period.

The programme's longevity is remarkable, says Cecilia Rocha, director of the Centre for Studies in Food Security at Ryerson University in Toronto, Canada, and author of an early report on Belo Horizonte's achievements (C. Rocha *J. Study Food Society* 5, 36–47; 2001). "Having more than 25 years of an approach to food and nutrition security is unique," she says.

Such success has drawn widespread attention. In 2019, a science panel tasked by the United Nations to guide implementation of the Sustainable Development Goals (SDGs), released its first progress report, which highlighted Belo Horizonte as an example for how larger cities could transform their food systems. Urban centres such as Windhoek, the capital and largest city of Namibia in southern

## BELO HORIZONTE BY THE NUMBERS

### US\$18 million

Spent annually on Belo Horizonte's 'right to food' initiative when it launched in 1993, led by Patrus Ananias de Souza of the Workers' Party (*Partido dos Trabalhadores*).

### 72%

The reduction of the under-five child mortality rate between 1993 and 2005, through a focus on providing enriched flour to low-income families and pregnant and nursing women.

### US\$27.2 million

The annual budget of the Secretariat for Nutrition and Food Security (SMASAN) in 2015, the year the SDGs were agreed. SMASAN employed 80 staff at this point, including 30 nutritionists.



PEDRO VIELA/GETTY

A mother and her son eat at an open-air restaurant set up at Praça da Estação in Belo Horizonte and funded by a bank.

Africa, and Cape Town, in South Africa, have shown interest in emulating certain aspects of the city's programme.

The Oranjezicht City Farm, a volunteer-run non-profit organization in Cape Town, for example, has partnered with the local government to transform a disused bowling green into a community vegetable garden and market. Incorporating an educational component is crucial to the success of such initiatives, according to a study led by researchers from North-West University, South Africa (J. Steenkamp *et al. Sustainability* **13**, 1267; 2021).

For cities that follow in Belo Horizonte's footsteps, the benefits could be wide-reaching, particularly with regard to several SDGs. A successful food-security model should move the needle on the UN's SDG1 (No poverty) and SDG2 (Zero hunger) goals, which

aim to eradicate extreme poverty (measured as people living on less than US\$1.25 a day) and end hunger and all forms of malnutrition by 2030. It could also have knock-on effects on other SDGs, says Rocha, such as access to quality education (SDG4) and achieving safe and inclusive sustainable cities and communities (SDG11).

Trends in research publishing suggest that efforts to align research priorities to SDGs have intensified in vulnerable nations. According to the 2021 UNESCO Science Report, published in June, SDG-related research output by low- and middle-income countries (see 'Sustainable living') is growing faster than that of wealthier nations, including Japan, South Korea, the United States and many European countries (see [go.nature.com/3zlojva](https://go.nature.com/3zlojva)). But strategies to hit SDG-related targets depend

on government support, both politically and through funding, which today presents a major challenge for Belo Horizonte, and Brazil more widely. Both Lopes and Rocha worry that the country's current administration, led by President Jair Bolsonaro, a right-wing populist, is indifferent to the work in Belo Horizonte and its achievements to date. This, in addition to pressures resulting from the COVID-19 pandemic, has seen many municipal programmes suspended.

"I hope that by the end of the year, these programmes come back," says Lopes. "Belo Horizonte, as well as other Brazilian municipalities, in partnership with the Federal University of Minas Gerais and other institutions in the country, have worked hard for better days."

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**185**

City vegetable gardens (alongside 48 orchards) created between 1998 and 2015 at locations including nursing homes, welfare centres and a local prison.

**126**

School and kindergarten gardens in 2012, up from 60 in 2008. The schools' 96,000 pupils spend an hour a day, on average, caring for plants.

**3.3 million**

Discounted meals served in 2012 by the city's five public restaurants and cafés to low-income and homeless customers. The menus are developed by SMASAN nutritionists.

**40**

Classes offered by SMASAN in the city's Lagoinha food market. They include food processing and preparation, baking, confectionery and international cuisine.