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## ■ AQ FEATURE

# A Tale of Two Cities: Curitiba

BY [Flora Charner](#)

**Brazil's (and the region's) leader in sustainability is making new strides, but some of the city's first successes are under strain.**

[\*View a slideshow of Curitiba below.\*](#)

It's nine a.m. in the Nossa Senhora de Aparecida *vila* (shantytown) in Curitiba, Brazil, and dozens of

people have formed a line at the top of a small hill. Despite a slight drizzle and the brisk cold of the morning, people stand patiently with filled wheelbarrows and carts. Two trucks pull up to the front of the queue and open their tailgates. The green one is practically empty, with the exception of a large scale. The white one is full of produce.

The first woman in line wheels a beaten-looking washing machine onto the scale. The uniformed workers check the weight: 26 kilograms (57 pounds). A man with a clipboard hands her a ticket, and she walks over to the other truck, parked in front. Within minutes, she has six kilos of oranges in her cart.

“For every four kilos of recyclable material, we exchange one kilo of food,” says Gilberto Hangi, the public sanitation controller for Curitiba’s environmental agency.

It’s all part of Curitiba’s *Câmbio Verde* (Green Change) program, created in 1991 to eliminate trash in some of Curitiba’s poorest and least accessible areas and to help local farmers who had a surplus of cabbage going to waste.

“The small growers were not selling the cabbage and they were barely making any profit,” Hangi said. “They would end up running over perfectly good ones with their tractors to make fertilizer.”

Launched in the early 1990s during the third term of Mayor Jaime Lerner, *Câmbio Verde* helped solidify Curitiba’s reputation as Latin America’s premier sustainable city. The establishment of Curitiba’s pioneering bus rapid transit (BRT) system in 1974 was an early sign of the city’s embrace of innovative approaches to the environment, but waste management represented an equally formidable challenge.

According to Curitiba’s environmental agency, an average 2,800 tons of recyclable waste are now collected through the *Câmbio Verde* program each year and exchanged for food. The program rotates through 100 different shantytowns on the outskirts of the city, making two stops a month in each neighborhood.

Some 20 years after it started, the program is still going strong. An estimated 35,000 families participate in the exchange every month.

In the Nossa Senhora de Aparecida *vila*, Simone Aparecida, 30, her family, and their neighbors have collected 66 pounds (30 kilos) of plastic bottles, cans and glass to exchange for produce.

## **Food and Education for the Young**



Locals trade in their recyclables for produce through Curitiba's *Câmbio Verde* program. Photo: Mark Ellis.



By the time we head back to the one-bedroom house where the Aparecida family has been staying for the past four months—heavy rain showers in the state of Paraná forced them to evacuate their home—Simone has three sacks of oranges, several heads of cabbage and bunches of bananas.

“This one will be happy about that,” Simone says, pointing at her one-year-old son Frade, whose fingers and face are already completely covered in banana goo. “Buying things like cabbage and oranges at the market is really expensive. Being able to count on this every other week is very helpful.”

More than 12 miles (20 kilometers) from central Curitiba, trucks filled with recyclables unload at the *Unidade de Valorização de Recicláveis* (Unit for the Valorization of Recyclables—UVR) plant in the suburb of Campo Magro. Their cargo includes items picked up in the city through the *Lixo Que Não é Lixo* (Trash That Is Not Trash) program, as well those dropped off by the Aparecida family and their neighbors at the *Câmbio Verde* collection.

According to João Vítor Rosset, an environmental engineer who manages the UVR, more than 40 percent of Curitiba’s recyclables are treated at the plant, which is managed by the non-profit *Instituto Pro-Cidadania Curitiba* (Pro-Citizen Institute of Curitiba). The organization uses the money from selling recyclables for social programs that provide clothing and food to the homeless.

The plant also plays a role in educating Curitiba’s young people about environmentally conscious citizenship—and ensuring that its legacy as a green city survives.

As a busload of high school students arrives at the UVR, an employee named Mariane leads the teenagers into a room to watch a slightly dated video about the importance of separating trash into two bins. After pausing the video, she asks, “Did you know that only 8 percent of Brazilian cities recycle?”

The teens seem surprised by the number. They grew up in an age when sorting trash was mandatory in Curitiba and are used to seeing the multicolored bins in the street for all different types of refuse. They know that trash is picked up three days a week and recyclables are collected two days a week on alternating days. After the video, Mariane starts showing off all her knick-knacks.

“This purse was made with potato chip bags,” she says, pausing for the “oohs” and “aahs” of the students admiring a tote bag woven out of Ruffles packets. “This chair was made with 95 plastic water bottles and can support up to 95 kilos [210 pounds].”

The students are taken to the separation plant—the heart of the UVR facility—where they watch hundreds of people with masks work in unison around four conveyor belts. “We receive material from collections made by the city government and classify them into dozens of different categories,” Rosset tells them. “Just for plastics alone, we have six different varieties. This process [not only] keeps tons of trash out of landfills; it helps preserve trees.”

*View a slideshow of Curitiba below.*



## Good Jobs, as Well

Most of UVR's 220 employees are local residents from Campo Magro and other nearby communities. Some, like Ilda Paulino, 40, have made recycling their family business.

“My husband and I both work here,” Paulino says. “I also have about seven or eight cousins who are sorters. There are so many of us here, I lose track.”



Paulino takes obvious pride in her work. “Sometimes I’ll be sorting things on the belt and I’ll find a margarine container or yogurt cup that has been completely washed,” she says. “The fact that someone chose to do that before throwing it away is very gratifying.”

Edimilho de Santos, 36, a former restaurant employee, has been working at the plant for three years and says he has never felt healthier.

“I’ve lost 10 kilos [22 pounds] since I started to work here,” he says. “I walk to work and have time to play soccer with my son in the afternoon before coming into work at four p.m.” In addition to practicing sustainable sorting at work, de Santos says he insists upon it at home.

“I make sure [my kids] separate the cans from the rest of the recyclables,” de Santos says. “We even re-use our organic waste and turn it into fertilizer for our crops.”

Workers like de Santos and Paulino earn an average of 800 *reais* (roughly \$350) a month—which is 15 percent above the national minimum wage—as well as medical and dental benefits and food and transportation stipends. UVR also provides the employees with uniforms and protective gear such as face masks, gloves and boots.

Rosset said his goal is to make sure the plant’s employees feel well cared for, and to keep finding innovative ways to reduce trash.

“We still end up with a portion of waste that we simply can’t categorize,” Rosset said. “My dream is to have a category for everything and to completely eliminate landfills.”

### **And the Other Policies?**

Thanks to initiatives like the uvr facility, Curitiba continues to be a model for sustainable cities.

During the 2012 Rio+20 United Nations Conference on Sustainable Development, the Global Forum on Human Settlements presented Curitiba with the Green City Award, making it the only city in South America recognized by the organization. But as one of the 2014 World Cup host cities, Curitiba will also have to undergo major renovations to receive hundreds of thousands of tourists.

One of the city’s challenges will be addressing the gridlock in its transportation system. More than 2 million people in greater Curitiba use the brt system, which has served as a model for 162 other cities. But the capacity of its 395 lines is strained daily.

“Sometimes, I have to wait for two or three buses before I can get on,” says Ivonete Salvador, 45, a housekeeper from the suburb of Tatuquara who commutes 1.5 hours to work in central Curitiba. “If they are too full, people won’t let you in.”

In a bid to increase its public transportation options, Curitiba’s current mayor, Gustavo Fruet, recently announced plans to build an underground metro system that will include 14 stations and service an area of 11 miles (17.6 kilometers). The \$4.5 billion *reais* (\$2 billion) project is expected to be completed by 2019.

Former Mayor Jaime Lerner believes Curitiba’s buses would not be so full if the system were running more efficiently.

“The quality of public transportation has declined,” Lerner says, adding that Curitiba should put more brt

buses on the roads and do a better job of defining exclusive bus lanes. “Passengers should not have to wait for more than one minute on the platform. If the system does not operate correctly, the buses get packed.”

Although Lerner is not against the underground metro project, he thinks the cheaper option—ground transportation—should not be ignored.

“I still believe the future of mobility is on the surface, and that the surface needs to be improved,” Lerner says. “If you want creative solutions, you need to cut one zero from the budget. If you want sustainability, you need to cut two.”

Whether Curitiba’s delicate balance of sustainability, mobility and cohabitation will be able endure the sudden injection of World Cup tourists into the city is unclear.

As the city continues to grow in importance and population, disorganized urban sprawls and *vilas* will continue to emerge. In the past decade, the number of cars in Curitiba has soared; it now has the third-largest per capita automobile ownership of all Brazilian cities.

Yet Lerner is optimistic about Curitiba’s future. “I have never liked calling it a model, because it is not paradise. We have our problems, we have *favelas*,” he says. “What makes this city unique is its constant search for innovation and its commitment to simplicity. These are the seeds of true sustainable growth.”

*All photos courtesy of Mark Ellis.*

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