

# UP CLOSE: BRAZIL

## ELIMINATING CFCs

### BRAZIL FACTS

1.87 tonnes of CO<sub>2</sub>  
emissions per capita  
90% literacy rate  
1,444 protected areas

Indiai lives in a small house with her family of five in a poor neighbourhood in the city of Sao Goncalo, Brazil. Like many low-income people in Brazil, the refrigerator she scraped together money to buy over a decade ago is now not only old, but also, because it is not energy efficient, a serious financial burden.

Indiai cannot afford to buy a new refrigerator, so she was selected to participate in an energy efficiency programme by her utility company, AMPLA. One afternoon in August 2009, Indiai received a surprise delivery of a new, energy-efficient refrigerator. The truck not only dropped off the new appliance, but took away her old one.

The old refrigerator would usually be brought to a local dump, where the chlorofluorocarbon (CFC) gas contained in its insulating foam and compressor would leak into the atmosphere, adding to Brazil's environmental burden. These gases contribute to the depletion of the ozone layer and cause global warming. In fact, one ton of CFC can warm the atmosphere 10,000 times more than one ton of CO<sub>2</sub>.

However, Indiai's old refrigerator was brought to a CFC-extraction workshop, the first of several stops it would make in order to strip it of all CFCs and then safely dispose of its carcass.

This successful overlap between poverty reduction, greenhouse gas elimination and the green economy — the step-by-step disposal of Indiai's old refrigerator is part of a new, growing industry in Brazil — is the culmination of a two-decade partnership between UNDP and the Government of Brazil. That partnership began in 1987 with the Montreal Protocol, an international treaty calling for the elimination of ozone-destroying gases that was signed and ratified by 196 nations. With the financial support of the Multilateral Fund for the Implementation of the Montreal Protocol, GEF and a variety of donors, UNDP has

been assisting countries as they work to comply with the Protocol's control measures for the past 20 years.

UNDP has been managing a global programme of over \$500 million that provides financial and technical assistance to more than 100 countries, enabling them to phase out the use of ozone-depleting substances in everything from refrigerators and air conditioners to aerosol containers and crop fumigators. Working with a broad range of partners, including government, industry, academia and civil society, UNDP's Montreal Protocol programme has eliminated over 63,000 metric tonnes of ozone-depleting gases from the earth's atmosphere.

As a result of UNDP's efforts in Brazil — in partnership with the Government and the private sector — more than 10,000 metric tonnes of ozone-depleting substances have been completely phased out, putting Brazil three years ahead of the Protocol's schedule. UNDP helped Brazil mobilize resources from international finance mechanisms like the Multilateral Fund and GEF; it also assembled a team of scientists, engineers and ozone and climate change experts to initiate and sustain this effort.

Today, the production, import and use of CFCs in the manufacturing of new refrigeration equipment in Brazil has come to an end. Nevertheless, there are still an estimated 11 million old refrigeration units in Brazil containing CFCs, representing a global warming potential equivalent to 33 million tonnes of CO<sub>2</sub> should they be allowed to leak into the atmosphere. UNDP is now working closely with the Government and private and public partners on a nationwide initiative to ensure the safe extraction and destruction of CFCs from old appliances.

When, in 2000, Brazil passed a law requiring power distributors to increase energy efficiency in poor households, power companies such as AMPLA realized

*A resident of Brazil's Saracuruna district receives a new CFC-free refrigerator as part of a private-sector energy efficiency programme.*



that replacing old, inefficient refrigerators with new, CFC-free units would generate energy savings and ensure that low-income customers would be able to pay their electricity bills. UNDP helps private companies locate innovative finance solutions to pay for the proper management and disposal of CFCs from old appliances including the refrigerators being collected through this programme. For example, UNDP supplies the necessary equipment, including special recovery toolkits, to the dismantling shop that received Indiai's old refrigerator. UNDP also provides training so that workers can safely handle and extract CFCs from the refrigerator's compressor.

As a result of the partnerships being brokered through UNDP's efforts to elimi-

nate CFC consumption in Brazil, a new, greener economy is being developed that takes advantage of opportunities like carbon financing. That economy is part of a chain that begins with energy efficient, CFC-free refrigerators for people like Indiai and her family, and ends with the total elimination of CFC emissions in Brazil.