

URBAN ISSUES

The Sprawl of Food Deserts

The North American urban landscape has changed considerably over the past few decades with the advent of the automobile as the transportation mode of choice. Privatized mobility allowed wealthier people to move outward from city centers toward the suburbs, and with them went many of the supermarkets that used to pervade urban areas. The steady suburbanization of major food retailers is contributing to the emergence of urban “food deserts,” areas within city centers where low-income people have poor access to vegetables, fruits, and other whole foods. Because many chronic diseases have been associated with low consumption of vegetables and fruits, along with high consumption of sugary or high-fat foods, urban food deserts may be taking a health toll on those who live in socially deprived neighborhoods.

Canadian researchers at The University of Western Ontario recently studied the evolution of food deserts since the 1960s in the mid-sized city of London, Ontario. They used a geographic information system (GIS) to map locations of supermarkets in 1961 and 2005. Then they assessed changes in supermarket access in relation to neighborhood location, socioeconomic characteristics, and access to public transit using multiple “network analysis” techniques, which take into account variations in how people are spaced and actually move throughout their environs.

In an article published 18 April 2008 in the online *International Journal of Health Geographics*, the research team reported that low-income residents of London's inner-city neighborhoods had poorer access to supermarkets than middle- and high-income residents. Moreover, spatial inequalities in access



“Mobile markets” can bring fresh produce into urban areas that lack access to well-stocked grocery stores

to supermarkets had increased over time. In 1961, more than 75% of London's inner-city population lived within 1 kilometer of a supermarket, giving them easy access to a variety of foods, says principal investigator Jason Gilliland, who directs the university's Urban Development Program. In 2005, he says, that number was less than 20%.

“One can say that this problem may only get worse in the near future, considering current concerns about rising food prices and food scarcity,” says Isaac Luginaah, Canada Research Chair in Health Geography at The University of Western Ontario. “[These] findings therefore require policy attention.”

Gilliland suggests several strategies for dealing with urban food deserts. To begin with, he says, cities should support planning policies that boost the inner-city population (e.g., better transportation, housing, and schools) while offering grocery retailers direct incentives (e.g., zoning allowances, tax holidays, or tax rebates) to locate downtown. City planners can also encourage smaller alternative food retailers, especially farmer's markets. For neighborhoods that cannot support a farmer's market every day, Gilliland suggests a “mobile market” that visits various neighborhoods throughout the week. For residents without a car, ride sharing and weekend shuttle bus services could

ehpnet | by Erin E. Dooley

EPA–China Environmental Law Initiative

http://epa.gov/ogc/china/initiative_home.htm

China's recent rapid economic expansion has created an array of serious environmental problems for that country, which Chinese officials are working to rectify with a solid environmental law framework. But implementing such laws is not always easy. In the fall of 2007, after a series of meetings with organizations in several Chinese cities, the U.S. Environmental Protection Agency (EPA) General Counsel launched the EPA–China Environmental Law Initiative to facilitate discussion on ways to foster environmental legislation and regulation. Information about this program is available online in both English and Chinese.

Visitors will find links to the websites of the initiative's collaborators, all of whom have experience in Chinese environmental law and the environmental matters encountered by U.S. businesses operating in China. There is a Legal Resources page of information on Chinese environmental statutes, regulations, and directives as well as treaties and other international cooperation activities to which the country is party. Also on this page are links to recent reports and other publications pertinent to the scope of the initiative.

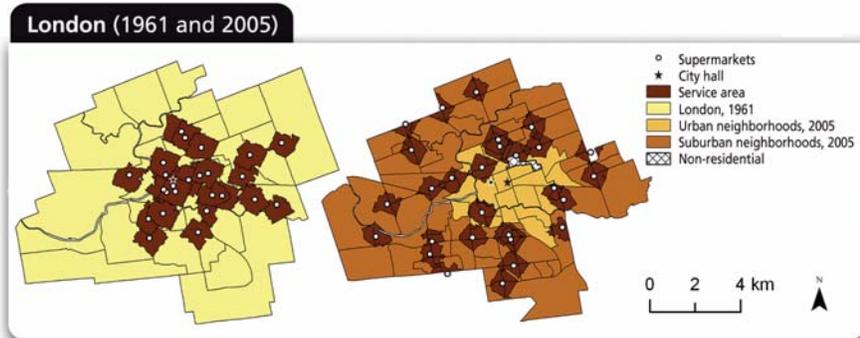
Recent relevant news articles are arranged on the homepage within subject headings that include pollution control, public participation, climate change/energy, and sustainability/pollution prevention. An archive of older items is also available. The homepage also features a calendar of upcoming events.

be explored to serve disadvantaged neighborhoods without a supermarket.

This is the first known historical analysis of how food deserts evolve over time, exploring empirically (and confirming) the assumption that pedestrians had easier access to grocery stores in the past, says Gilliland. “On the other hand,” he adds, “many people, including policy makers, may assume that accessibility is universal in the age of the automobile, without recognizing the problems faced by people without an automobile.”

Future studies will need to factor in car trips to supermarkets, which the London study did not do, says nutritional epidemiologist Margo Barker of the University of Sheffield School of Medicine and Biomedical Sciences. It remains to be seen, she adds, whether good access to a supermarket actually benefits food decisions and nutritional health, particularly for those most in need.

To improve future studies of these issues, Gilliland says it may be helpful to interview people who live in food deserts to better understand the psychological, economic, and personal effects of these settings. “After all,” he says, “the continued closure of supermarkets in disadvantaged areas will lead to more unemployment and likely have devastating effects on the health of an already vulnerable population.” —M. Nathaniel Mead



GIS mapping shows the outward migration of supermarkets in a mid-sized Canadian city

Source: Larsen K, Gilliland J. *Int J Health Geogr*. 2008 Apr 18;7:16. ©2008 Larsen and Gilliland; licensee BioMed Central Ltd.