The Emerging Megacity: Ahmedabad, India

Victoria Ruan

Introduction:

Ahmedabad is the largest city in the Indian state of Gujarat with more than seven million inhabitants. Based on the city's rapid population growth, Forbes magazine has ranked Ahmedabad as "the third fastest growing city of the decade" (Kotkin). The city's population increases about 2% annually and is estimated to reach eleven million by 2035 (Ritchie).

A Unique Challenge:

There are approximately 250,000 families living in slum areas in Ahmedabad (Lehner). Like many developing cities in India, Ahmedabad's development of necessary infrastructure and policies haven't kept pace with the rapid and unexpected urban growth. One of the most prominent issue is the spread of malaria, a communicable mosquito-borne disease. At present, urban malaria accounts for approximately "15% of India's total malaria burden", and Ahmedabad has seen a "growing number of malaria cases" despite efforts by the National Vector Borne Disease Control Program to slow transmission (Parizo). However, the incidence of malaria is not evenly distributed in the city. A recent research led by University of Chicago and Ahmedabad Vector Borne Diseases Control Department has investigated the underlying association between socio-economic status and the malaria transmission. Researchers found out that the high risk region has "significantly higher unemployment, slum density, total population and number of households" (Santos-Vega). Several factors render the slums suitable breeding grounds for mosquitos and contribute to the transmission of malaria. The crowded living condition leads to a lack of ventilation and clean water, especially in the hot summer when the temperature reaches 50 degrees (Ahmedabad Municipal Corporation). Even worse, the water supply is limited to only 2 hours a day, impelling most slum inhabitants to store water inside their houses in earthen pots (Ahmedabad Municipal Corporation). Moreover, the

excessive use of insecticides “increases the resistance in mosquitoes”, and the limited access to healthcare facilities encourages the rampant growth of mosquito population (Santos-Vega).

Different Perspectives:

Thakore’s family once lived in Abhuji Na Chhapra, a slum region constituted of 55 families. For years, the family lived in a shelter with no windows, “trekked daily to the tap on the road for water”, and suffered from the water borne diseases (Carr). There are thousands of slum dwellers like Thakore’s family in Ahmedabad. To solve the slum problems, the India government has implemented several programs and policies. In the late 1980s, the government began a relocation program to help people move out of the slum regions. However, many slum inhabitants were unwilling to move out since the new houses were generally isolated and far away from the city center, which made the access to work, healthcare, and education more inconvenient than before (Barnhardt). Therefore, the government has proposed an innovative solution to the problem by promoting public-private partnerships. Instead of relocating slum dwellers to other places, the new approach is to let contractors provide free apartments to slum dwellers. In exchange, the government will give the contractors any leftover land, which “they could use to build expensive apartments for sale on the open market” (Carr). This policy provides contractors incentives to rebuild the slums and thus improve citizens’ living conditions as well as reduce the transmission of malaria.

Population Prediction:

Even though Ahmedabad’s population has grown dramatically in the past decades, the research reveals that the population growth will probably come to an end. The demographic statistics of India’s population shows that the number of children under the age of five and the age of fifteen peaked in 2007 and 2011 respectively (Ritchie). Since then, the number of new generation

has been falling. India's population will still continue to grow as a result of "population momentum", but it will reach its peak several decades later when the baby boomers grow up (United Nations Department of Economic and Social Affairs). Also, India's population pyramid has transformed from a triangle to a more cylindrical shape due to the increasing literacy rate and decreasing fertility rate (C.I.A World). As people become more educated, they prefer to have less children because they want to provide each child better life quality and education. Although the Ahmedabad's population is projected to become 51 millions after 100 years ($7 \times 1.02^{100} = 50.7125$), the real number would probably be much lower either as a result of the end of population momentum or the environmental resources constraints.

Works Cited:

Lehner , A., and V. Kraus. *URBAN GROWTH SCENARIOS OF A FUTURE MEGA CITY: CASE STUDY AHMEDABAD*. AIT Austrian Institute of Technology, July 2016.

Barnhardt, Sharon. "Long-Run Effects of Slum Development in Ahmedabad, India." *The Abdul Latif Jameel Poverty Action Lab*, 2007, www.povertyactionlab.org/fr/evaluation/long-run-effects-slum-development-ahmedabad-india.

Carr, Carlin. "How the Slum Women of Ahmedabad Led a Housing Revolution." *The Guardian*, Guardian News and Media, 14 Apr. 2016, www.theguardian.com/cities/2016/apr/14/slum-women-ahmedabad-india-housing-revolution.

"Disease Surveillance, Diagnosis, and Treatment." *Ahmedabad Municipal Corporation*, 2014, ahmedabadcity.gov.in/portal/jsp/Static_pages/malaria_cell.jsp.

Kotkin, Joel. "The Problem With Megacities." *Forbes*, Forbes Magazine, 9 Aug. 2011, www.forbes.com/sites/megacities/2011/04/04/the-problem-with-megacities/#5e30ee3e6f27.

Parizo, Justin, et al. "Spatiotemporal Analysis of Malaria in Urban Ahmedabad (Gujarat), India: Identification of Hot Spots and Risk Factors for Targeted Intervention." *The American Journal of Tropical Medicine and Hygiene*, The American Society of Tropical Medicine and Hygiene, 7 Sept. 2016, www.ncbi.nlm.nih.gov/pmc/articles/PMC5014265/.

Ritchie, Hannah. "Ahmedabad Population 2019." *Ahmedabad Population 2019 (Demographics, Maps, Graphs)*, Oxford University, 15 Jan. 2019, worldpopulationreview.com/world-cities/ahmedabad-population/.

Santos-Vega, Mauricio, et al. "Population Density, Climate Variables and Poverty Synergistically Structure Spatial Risk in Urban Malaria in India." *PLoS Neglected Tropical Diseases*, Public Library of Science, 1 Dec. 2016, www.ncbi.nlm.nih.gov/pmc/articles/PMC5131912/.

The Impact of Population Momentum on Future Population Growth . United Nations Department of Economic and Social Affairs, Oct. 2017, esa.un.org/unpd/wpp/publications/Files/PopFacts_2017-4_Population-Momentum.pdf.

"The World Factbook: India." *Central Intelligence Agency*, Central Intelligence Agency, 1 Feb. 2018, www.cia.gov/library/publications/resources/the-world-factbook/geos/in.html.