Population other than White, Non-Hispanic

This EnviroAtlas community demographics map layer depicts the number of individuals in a US census block group who are other than non-Hispanic white. The term "minority" is used throughout this fact sheet to refer to populations other than non-Hispanic white for ease of reference. Though the term is accurate at the time of creation of this fact sheet, minority populations are expected to comprise the majority in the future.

Why are data on minority populations important?

The health of people of all ages and races/ethnicities is partially determined by the environmental conditions in which they live. Minority populations in the U.S. are often disproportionately exposed to environmental degradation; this fact is the basis for the environmental justice movement.[1] Minority status is statistically associated with low income and degraded neighborhood infrastructure, which are in turn related to legacies of discrimination.[1] These circumstances can result in the inequitable distribution of both public assets and risk as well as in weakened individual and community resiliency to stress.

The environmental justice movement was sparked by the disproportionate distribution of toxic emissions and other waste in disadvantaged communities. Siting requirements for noxious facilities typically include inexpensive land, where minority residents may predominate. Hazardous siting practices have also targeted low-income and minority neighborhoods because of their limited ability to generate political or legal resistance. The result is that many such neighborhoods are at risk from cumulative health impacts because of the occurrence of multiple hazards in close proximity.

Exposure to natural hazards such as flooding can also disproportionately affect minorities, who may occupy more vulnerable housing. In addition, minority populations can suffer the negative effects of historical injustices such as reduced access to quality education, nutrition, and health care. Such adverse conditions reduce human potential and decrease resiliency to stressful events.

Studies show that a higher proportion of minorities other than non-Hispanic whites live in urban areas that lack tree cover, open green space, and other public infrastructure.[1,2] Ecosystem services from green infrastructure can help to buffer populations from harmful pollution and natural hazards. Trees and open green space also promote healthy child development and healthful behaviors through adulthood. Green infrastructure can be managed to reduce environmental and health inequities.

Minority populations have higher rates of obesity, high blood pressure, diabetes, and heart disease.[3] Regular exercise can help prevent these diseases, and people with access to parks and tree-lined streets have more opportunities for exercise. Physical activity and simple exposure to natural features also reduce stress, which contributes to high blood pressure and heart disease, among many other health problems. African Americans are three times more likely to be hospitalized from asthma or to die from asthma-related causes than non-Hispanic whites.[4] Areas located near major sources of pollution, like highways and factories, benefit from nearby forested areas and tree buffers to filter airborne pollutants including particulates, sulfur dioxide, nitrogen dioxide, and ozone.

Minority populations in the United States play an important role in the productivity and prosperity of the country. Healthy people contribute more to the economy and depend less on social programs. Adequate and equitable access to beneficial natural amenities can help to improve health and well-being in minority communities.[3]

How can I use this information?

This demographic map layer can be used in conjunction with other EnviroAtlas data to explore the density and distribution

CONTINUED ON BACK ▶

of minority populations relative to the presence of risk factors and beneficial ecosystem services. Minority population data can be overlaid with EnviroAtlas community demographics poverty data (population with income below twice the U.S. poverty level). Planners can then consider additional investments in greenspace or recreation facilities for areas with overlapping low income status, health risk factors, and a lack of green infrastructure.

This map can be combined with maps of pollution sources such as busy roadways and facilities with air discharge permits. Populations living near these pollution sources could be at increased risk for developing health impacts such as asthma or adverse birth outcomes. Block groups could be ranked by the highest number of people in minority populations who would be served by additional tree cover to filter and buffer air pollutants.

Other pertinent EnviroAtlas data layers relate to the health benefits gained from pollutants removed by tree cover, including data layers addressing negative health outcomes avoided (e.g., asthma exacerbation and acute respiratory symptoms) and the estimated monetary value of health and productivity losses avoided. In addition, users may examine populations within 300 meters of busy roadways and roadways with and without tree buffers.

How were the data for this map created?

This map was created by combining the US Census 2010 TIGER/Shapefile boundary data with the race/ethnicity data in US Census 2010 Summary File 1 Population Subjects Summarized to the Block Level—Table P5: Not Hispanic or Latino (P0050002).

What are the limitations of these data?

These data are presented at the census block-group scale. A block-group is a collection of census blocks, the smallest area mapped by the U.S. Census Bureau. Population data are supplied by census blocks to preserve the privacy of individuals. It is important to remember that residents are not distributed evenly throughout the area of a block-group. The U.S. Census Bureau maintains a website on information quality guidelines and statistical quality standards.

How can I access these data?

EnviroAtlas data can be viewed in the interactive map, accessed through web services, or downloaded. U.S. Census 2010 data and TIGER shapefile boundary data are available on U.S. Census websites.

Where can I get more information?

A selection of resources on minority population health and its relationship to ecosystem services is listed below. U.S. Census 2010 Demographic Profiles provide information on this demographic group and other groups and income levels by state. In-depth information on the relationships between urban ecosystems and human residents, such as green space and human health and well-being, can be found in EPA's Eco-Health Relationship Browser. For additional information on how the data were created, access the metadata for the data layer from the drop down menu on the interactive map table of contents and click again on metadata at the bottom of the metadata summary page for more details. To ask specific questions about this data layer, please contact the EnviroAtlas Team.

Acknowledgments

The data for this map were prepared by Timothy Wade, EPA. The fact sheet was created by Andrew Potter, Oneida Total Integrated Enterprises (OTIE), Laura Jackson, EPA, and Sandra Bryce, Innovate!, Inc.

Selected Publications

1. Cole, L.W., and S.R. Foster. 2001. *From the ground up: Environmental racism and the rise of the environmental justice movement*. New York University Press, New York.

2. Estabrooks, P.A., R.E. Lee, and N.C. Gyuresik. 2003. Resources for physical activity participation: Does availability and accessibility differ by neighborhood socioeconomic status? *Annals of Behavioral Medicine* 25:100–104.

3. Powell, L.M., S. Slater, F.J. Chaloupka, and D. Harper. 2006. Availability of physical activity related facilities and neighborhood demographic and socioeconomic characteristics: A national study. *American Journal of Public Health* 96(9):1676–1680.

4. Forno, E., and J.C. Celedón. 2009. Asthma and ethnic minorities: Socioeconomic status and beyond. *Current Opinion in Allergy and Clinical Immunology* 9(2): 154-160.

Brulle, R.J., and D.N. Pellow. 2006. Environmental justice: Human health and environmental inequalities. *Annual Review of Public Health* 27:103–124.

Ritz, B., and M. Wilhelm. 2008. Air pollution impacts on infants and children, UCLA Institute of the Environment and Sustainability. Accessed June 2014.