

Air quality is an important global issue that should be acknowledged by federal and city level governments in order to promote a growth in positive Air quality. Air pollution is one of the major problems of urbanization. With innovation comes the harmful emission of gases and smoke from corporations and factories. These harmful particles in the air resulted in many cases of allergies and respiratory problems in city dwellers. Harmful air quality disproportionately affects low socioeconomic minority groups as a result of financial and educational factors. Specifically, there is a correlation of high asthma rates and high air pollution in the Los Angeles area among nonwhite groups compared to white groups.

Market-driven sources of air pollution are primarily present in high-poverty neighborhoods, where people of color are overrepresented, as a result of cheap land, where low socioeconomic neighborhoods reside, that is accessible to markets. The placing of these sources was done by neighborhoods with high political power, in which white communities disproportionately reside. Not to mention, racial discrimination in housing is an important factor that set barriers for people of color to reside in highly valued neighborhoods that do not have sources of air pollution (Kravitz-Witz 5).

According to Raoul S Lievanos, a spatial relationship exists between environmental hazards and segregated nonwhite residential areas in the United States (2). More so, The CalEnviroScreen, a tool used to measure environmental health vulnerability, demonstrates similar disparities for neighborhoods with a higher population of nonwhite populations, most notably Latinos and African Americans(Lievanos 4). Among these disparities, there exists financial barriers that can inhibit communities from improving their health and wellbeing. Thus economic burden is an important factor in determining health and air quality in communities. Economic disadvantages can increase a neighborhood's vulnerability and exposure to environmental health hazards(9). These detrimental factors can range from, but are not limited to, linguistic isolation, unemployment, and limited educational attainment.

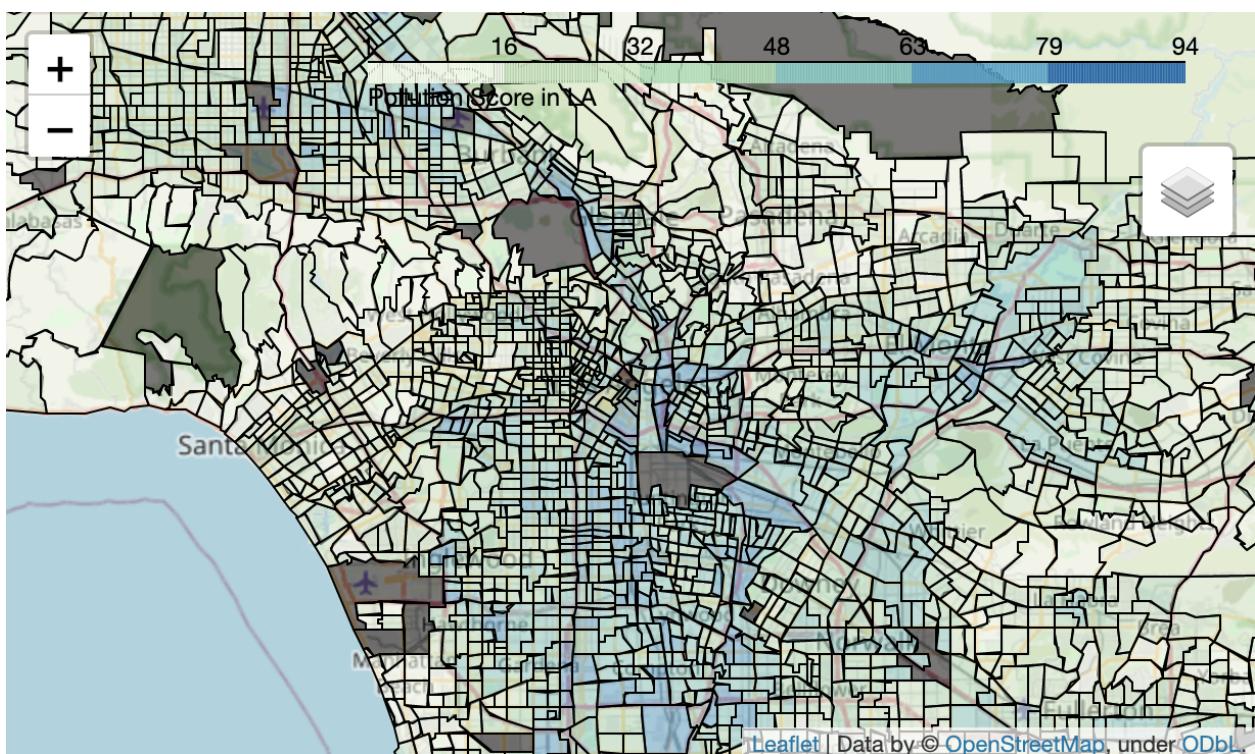
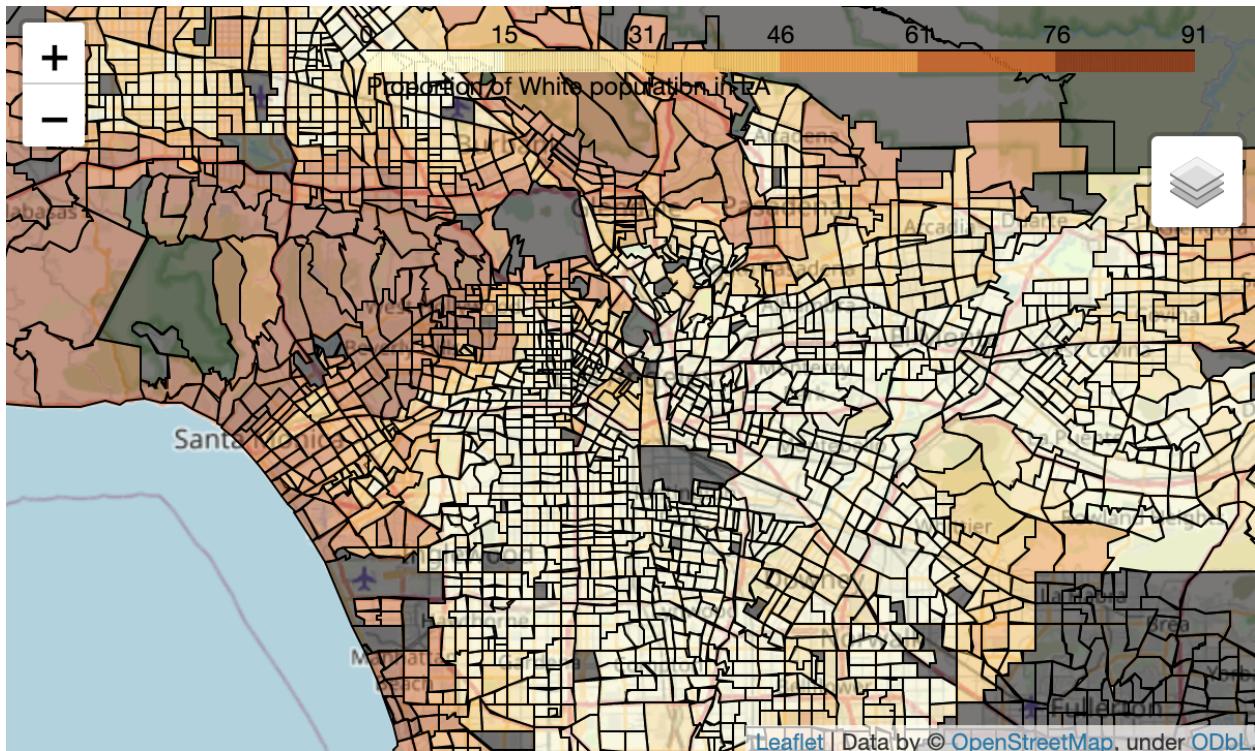
Further research done through CalEnviroScreen demonstrates that primarily nonwhite populations demonstrate cumulative disadvantage factor variables that further contribute to their vulnerability in air pollution(Lievanos). There is a correlation between the increase of economic advantages and an increase in vulnerability predictor of cumulative pollution burden. This demonstrates that the socioeconomic background of communities is an important factor in determining the air quality and air pollution in an area.

Health vulnerability is another factor that should be considered when determining environmental pollution burden in a community. Air pollution is a hazardous factor that can contribute to health problems, with asthma-related health problems being a primary outcome(Kravitz-Witz 1) . A

study made by Nicole Kravitz-Wirtz demonstrates that exposure to air pollution in a person's childhood can contribute to the development and risk of asthma. The risk of this health problem increased when a child was exposed to a high-poverty neighborhood. Thus there exists a correlation in asthma risk for low socioeconomic neighborhoods as these communities tend to have higher levels of air pollution (Kravitz-Witz 1).

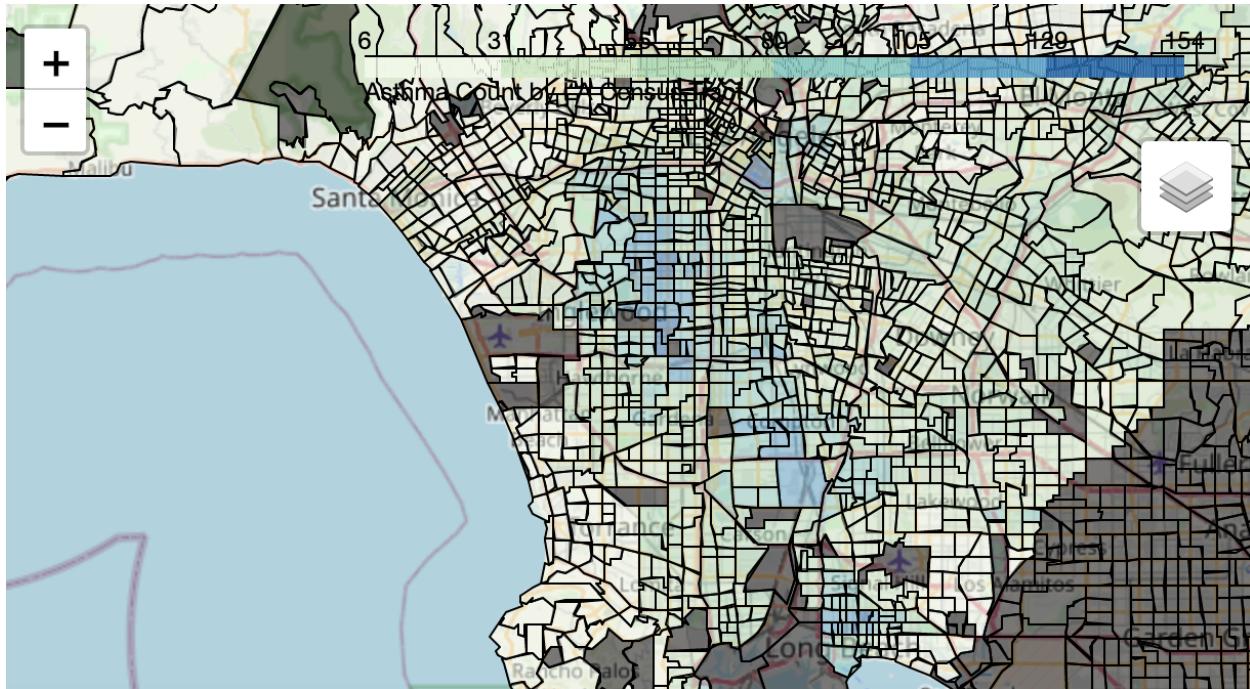
Financial disadvantages contribute to asthma risk since high-poverty neighborhoods may lack in health care access and the necessary resources to properly address health problems that arise from air pollution and poor air quality(Kravitz-Witz 9). Due to lacking in financial access, expecting mothers living in low socioeconomic communities cannot provide their child with the proper protection and prevention of health risks that arise from air pollution. Therefore, the early-life exposure to poor air quality increases a child's risk to asthma in high-poverty neighborhoods compared to low-poverty neighborhoods (Kravitz-Witz 10).

According to the CalEnviroScreen 3.0 data, the low air quality and environmental pollution burden has a greater correlation and presence among the nonwhite population in Los Angeles when compared to the white population in Los Angeles. Looking at the two maps below, White people primarily are in the outskirts surrounding the central part of the city with notable places such as Santa Monica as well as Beverly Hills showing some of the highest population of white people in Los Angeles. Looking onto the second map, we are able to see that there is a strong correlation between the areas of Los Angeles where there is a smaller population of white people and also where there is the most amount of pollution in the city. This is a clear case of environmental justice, where specific groups (POC) are disproportionately impacted by the environment.



As a result, the CalEnviroScreen 3.0 data also demonstrates a higher presence of the health problem, asthma, among nonwhite communities compared to white communities. Looking at the map below, we are able to see the asthma count in the Los Angeles area mimics closely to that of

the pollution map score above. Further, it displays that the asthma rates for cities in the outskirts of Los Angeles, away from the main traffic area of the city, is a case of urban planning that is indirectly segregated by race, leading POC to have health consequences due to the urban landscape they are forced to live in.



Therefore, we see a stark contrast in health simply due to race and socioeconomic factors, most deeply affecting areas such as downtown Los Angeles and Compton an area that is historically filled with people of color while avoiding areas such as Santa Monica and Beverly Hills that sees high socioeconomic status, single family households, as well as a high density of White people.

Recommendations:

Pollution is a problem that affects humans all over the globe. It causes many health problems, including, but not limited to, asthma, bronchitis, and emphysema. Studies have shown that exposure to pollution during early stages of a child's life increases risk of asthma development. This risk is exponentially worse for children born and brought up in under-resourced neighborhoods since they face inadequate healthcare access, poorer nutrition, and higher levels of psychological stress that often accompany concentrated poverty. On top of that, research has

shown that these vulnerabilities are race-based as well. This has been “often attributed to the legacy of systematic housing market discrimination, real estate steering practices, and blocked channels of residential and economic mobility, which tend to place nonwhites, especially blacks and Latinas/os, at heightened risk of exposure to industrial and transportation-related health hazards in California and through much of the United States,” according to Raoul S. Liévano from the sociology department at the University of Oregon.

The California Community Environmental Health Screening Tool (CalEnviroScreen) helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution’s effects. But, since this tool no longer considers race as a factor in environmental vulnerability, it needs to be modified and paired with other policies that consider how all races are affected by pollution. CalEnviroScreen needs to be merged with additional data to show how consequential effects of environmental health hazards disproportionately affect various races, mainly the Latina/o community. This community, the most vulnerable, faces multiple forms of socioeconomic disadvantage and health vulnerability.

Firstly, CalEnviroScreen needs to be revamped with race considered as a factor, so that the government can see the extent to which the pollution hazard distribution is skewed. Specifically, the extensive definition of Latina/o should be more specific. This includes accounting for country of origin, English-speaking ability, income, and education, etc. This would allow us to understand which particular groups are affected, and further action can be taken by the government.

Second, environmental studies and research should focus more on historical processes and events that concentrate cumulative pollution burdens in California neighborhoods. Meaning, the reason behind why certain communities are affected more by pollution than others should be found and considered further. Raoul S. Liévano states that studies should “examine how segregationist ideologies, state policies, real estate industry actions, and various dynamics of neighborhood change spatially concentrated industrial land uses, major transportation corridors, cumulative pollution burdens, and vulnerable populations in California.” This should become policy in order to prevent further unequal consequences for certain races and communities, as well as to fix the current concerns. Vulnerable and segregated populations, already in hardship, struggle with many problems, mainly health, caused by pollution. It is vital that researchers and policymakers focus their attention on these communities to bring them up and halt further decline.

Work Cited

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Visuals:

