Disparities in Health Effects of Climate Change
Knoxville Branch NAACP

Heat Deaths
Heat waves are increasing in both severity and frequency, and they are occurring more often in regions where people do not have ready coping mechanisms. Climate change will increase heat-related deaths. Lower income people living in urban areas are the most vulnerable to heat waves.

The most common cause of death due to heat is heart attacks, but increased temperatures are also associated with increased rates of death due to diabetes, stroke, respiratory disease, accidents, violence, suicide, and homicide. In addition, heat exposure can result in non-fatal heat cramps, fainting, heat exhaustion and heatstroke.

During a heat wave, urban areas get hotter than surrounding areas. Cities have asphalt and concrete surfaces that absorb and retain heat, making daytime temperatures hotter and nights warmer. Over 43% of African Americans live in these urban “heat islands,” compared to 20% of Euro-Americans.

The increased risk of death during a heat episode is twice as large for African Americans than for Euro-Americans. As climate change intensifies heat stress, reliance on strategies such as improved health care and air conditioning are likely to widen the gap between the heat mortality rates of the rich and poor, who do not have equal access to health care, weatherized homes, or air conditioning.

Air Pollution and Asthma
As a result of the cumulative effects of the political and economic disempowerment and racism, the vast majority of African Americans live in neighborhoods with much higher average exposure to air pollutants of every type. In 2002, an estimated 71% of African Americans lived in counties in violation of federal air pollution standards, as compared to 58% of Euro-Americans. African Americans are more likely than Euro-Americans to live closer to the nearest industrial emissions sources and to live within two miles of multiple industrial emission sources. More segregated communities have greater disparities of pollution exposure and higher cancer risks.

Asthma, made worse by pollution, affects African Americans at a higher rate than Euro-Americans. African Americans are hospitalized for asthma at three times the rate of Euro-Americans and die of asthma at twice the rate. Knoxville persistently remains in the top three asthma cities in the nation.

68% of African Americans live within 30 miles of a coal-fired power plant, as compared to 56% of Euro-Americans. They are also more likely to live near a landfill or incinerator.

Motor vehicles are a particularly important source of exposure to air pollution, especially ozone and particulates. Over 35 million Americans live within 300 feet of a major road, and African American children are three times more likely to live in high-traffic areas than their Euro-American peers; several studies show that African American children are more likely to attend day care, preschool, and school in areas of high car traffic.
Ozone has particularly adverse health effects and is associated with cardiac and respiratory problems, especially asthma. It is also linked to acute asthma attacks, the onset of asthma in children, and to sudden infant death syndrome. Elevated concentrations of ozone are also associated with increased rates of hospitalization for cardiac and respiratory concerns.

Particulates are very small particles formed from combustion of coal or the burning of diesel that are breathed into the lungs. It is associated with making asthma symptoms worse, increased hospitalization, and 6% of all infant deaths.

**Health Care**

African Americans stand to gain a substantial improvement in health when the burning of fossil fuels is reduced. Since African Americans have been disproportionately burdened by air pollution and their health effects, this reduction in burning of fossil fuels will affect them even more than other groups.

The disparities in health coverage are declining due to the Affordable Care Act. Before the marketplaces opened in 2013, about 14.3 percent of Euro-American adults did not have coverage, compared to 22.4 percent of African-Americans. As of March 2015, about 9 percent of Euro-American adults were uninsured, compared to 13.2 percent of African-Americans.

Among the uninsured, climate change poses higher risks. As diseases spread into new territories where they are less well-known, the lack of regular and preventative care becomes a life-threatening problem for the uninsured.

**Food Security**

African Americans are more vulnerable to food price increases due to climate change or to climate and energy policy because they spend one-quarter of their income on food, compared to a national average of 14.6%.

The increasingly extreme weather of climate change can destroy crops and reduce yields. Since 2005, the world has experienced a dramatic surge in the price of many staple food commodities. Much of the political instability in the Middle East is due to climate driven drought. As the impacts of food insecurity spreads from the developing to the developed world, there will be pervasive impacts due to climate variability, hunger, and associated uprising of poor people worldwide.

**Food Deserts in Knox County**

Knox County Community Health Assessment 2015

**Resources**

* A Climate of Change: African Americans, Global Warming, and a Just Climate Policy in the U.S., J. Andrew Hoerner and Nia Robinson: Environmental Justice and Climate Change Initiative, Oakland CA (2008.)
* Hidden Consequences of Climate Change, NAACP.
* Support for proposed EPA standard to limit air pollution caused by motor vehicles, NAACP 2013.

Prepared by Environment and Climate Justice Committee of the Knoxville Branch of the NAACP.