

Environmental racism

Environmental racism is environmental injustice that occurs in practice and in policy within a racialized context.^[1]

In 1982, the term was coined by Benjamin Chavis, who was the then executive director of the United Church of Christ (UCC) Commission for Racial Justice, in response to the dumping of hazardous PCB waste in a town in Warren County, North Carolina. The UCC and US General Accounting Office (GAO) reports on this case in NC brought public attention to the strong association between locations of hazardous waste sites and poor minority neighborhoods.^{[2][3]} Early activists in environmental racism, Chavis and Robert Bullard pointed out institutionalized racism stemming from government and corporate policies that led to environmental racism. Practices like redlining, zoning, and colorblind adaptation planning,^[4] and factors that inhibit residents from preventing these practices include their low socioeconomic status, and lack of political representation and mobility that all contribute to environmental racism.^{[5][6]}

Environmental racism can be explained through a number of ways and in most cases usually include four unique patterns. The first one includes exposure to hazardous waste. It can also be identified by determining how vulnerable a community is to issues like flooding. The accessibility of potable water can also help in measuring environmental justice. Finally, a discriminatory waste management program can also be considered a case of environmental injustice. Some social scientists have argued that some causes of environmental racism are intentional, for example, the dumping of hazardous waste in a minority community.^[7] Apart from intentional reasons, this kind of racism can also be caused by structural and institutional elements. Chavis defined environmental racism in five categories. First, he termed it as racial discrimination in defining environmental policies. He also stated that this occurs when these regulations and laws are being enforced. He further stated that it is the deliberate targeting of communities of color as far as dumping of toxic waste is concerned. He also referred to this term as the official sanctioning of dangerous poisons and pollutants in the minority communities. Finally, he termed it as the history of exclusion of people of color from attaining leadership positions in the ecological organizations.^[8] Other activists like Robert Bullard also had their own definition for the term claiming that it refers to any policy or directive that differentially harms people, groups, or even communities based on their color

The acknowledgement of environmental racism prompted the environmental justice social movement that began in the 1970s and 1980s in the United States.^[9] Although environmental racism has been historically tied to the environmental justice movement, throughout the years the term has dissociated more and more from the environmental justice movement.^[10] In response to cases of environmental racism, grassroots organizations and campaigns have brought more attention to environmental racism in policy making and emphasize the importance of having input from minorities in policy making.^[11] Although environmental racism was coined in the US, it also occurs on the international level. Examples include the exportation of hazardous wastes to poor countries in the Global South with lax environmental policies and safety practices (pollution havens).^[5] Marginalized communities that do not have the socioeconomic and political means to oppose large corporations are at risk to environmentally racist practices that are detrimental and sometimes fatal to humans. Economic statuses and political positions are crucial factors when looking at environmental problems because they determine where a person lives.^[12] People who do not have those privileges are usually the ones who suffer from environmental problems.

Environmental racism crosses boundaries of countries and is addressed below in the context of environmental racism that has occurred outside of the US, where the term was coined.

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Background

In the United States, the first report to draw a relationship between race, income, and risk of exposure to pollutants was the Council of Environmental Quality's "Annual Report to the President" in 1971, in response to toxic waste dumping in an African American community in Warren County, NC.^[13] After protests in Warren County, North Carolina, the U.S. General Accounting Office (GAO) issued a report on the case in 1983, and the United Church of Christ (UCC) commissioned a report exploring the concept in 1987 drawing a connection between race and the placement of the hazardous waste facilities.^{[2][3][11]} Thus, the outcry in Warren County was an important event in spurring minority, grassroots involvement in the environmental justice movement by addressing cases of environmental racism.^[11] One activist, Benjamin Chavis, who at the time was the executive director of the Commission for Racial Justice of the United Church of Christ coined the term *environmental racism* in 1982 in response to the case.^[11]

From the groundbreaking reports on environmental racism in Warren County, NC, the accumulation of studies and reports on cases of environmental racism and injustices garnered increased public attention in the US, and eventually led to President Bill Clinton's 1994 Executive Order 12898.^{[14][6]} This was a historical step in addressing environmental injustice on a policy level, especially within a predominantly white-dominated environmentalism movement.^[15]

Environmental racism was coined in the US but also exists on an international scale between countries in the Global North and Global South, and between different races and ethnicities on different continents. Corporations in the Global North often produce dangerous chemicals banned in the United States and export them to developing countries, or send waste materials to countries with less stringent environmental laws.^[16] While the US approach to environmental racism emphasizes race-based discrimination and structures policies to provide equal treatment, the European approach to environmental racism focuses on changing the social conditions that result in inequality^[17]

Cost-benefit analysis

Cost-benefit analysis (CBA) is a process that places a monetary value on costs and benefits to evaluate issues.^[18] Environmental CBA aims to provide policy solutions for intangible products such as clean air and water by measuring a consumer's willingness to pay for these goods. CBA contributes to environmental racism through the valuing of environmental resources based on their utility to society. The more someone is willing to pay for a resource such as clean water or air benefits society more than when people are not willing to pay for these goods. This creates a burden on poorer areas, however, by relocating toxic wastes and other environmentally hazardous goods through the justification that they are not willing (or able) to pay as much as a wealthier area for a clean environment. The placement of toxic wastes near poor people lowers the property value of already cheap land. Since the decrease in property value is less than that of a cleaner, wealthier area the monetary benefits to society are greater by dumping the toxic waste in a "low-value" area.^[19]

Definition

Chavis defined the term as "racial discrimination in environmental policy making, the enforcement of regulations and laws, the deliberate targeting of communities of color for toxic waste facilities, the official sanctioning of the life-threatening presence of poisons and pollutants in our communities, and the history of excluding people of color from leadership of the ecology movements."^[6] Expanding the definition in "The Legacy of American Apartheid and Environmental Racism," Robert Bullard describes the environmental racism "refers to any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities based on race or color"^[20]

There are four unique patterns that help identify and measure environmental injustice. Exposure to hazardous waste, how vulnerable a community is to flooding, how accessible potable water is, and discriminatory waste management processes.^[21]

While some social scientists view the siting of hazardous facilities in minority communities as a demonstration of intentional racism,^[22] others view the causes of environmental racism as structural and institutional.^[22]

There are four factors leading to environmental racism: cheap land, lack of political power, lack of mobility, and finally poverty. First, cheap land is sought for economic reasons but cheap land can also be found due to lack of power in the community to resist the corporation. Second, the lack of political power carried by poor minority groups allow businesses to act with little to no resistance. Politicians and lawmakers are able to better understand communities that have the resources to make their beliefs known, unlike impoverished minority communities. Third, the lack of mobility provides a stream of workers who can be paid minimum wage and thus do not have the funds to leave the now hazardous community. Finally, the overall communities lack of money contributes to all the factors listed above and overall reduces the communities ability to act both physically and politically.^[23]

Cases of Environmental Racism by Location

North America

In the United States, correlation between the sites of hazardous waste facilities and minority communities was publicly addressed in the 1983 U.S. Government Accountability Office (GAO) report in response to the Warren County, NC protests.^[24] Minority communities do not have the financial means, resources, and political representation to oppose hazardous waste sites.^[25] They also may depend on the economic opportunities the site brings and are reluctant to oppose its location at the risk of their health.^[26] Additionally, controversial projects are less likely to be sited in non-minority areas that are expected to pursue collective action and succeed in opposing the siting of hazardous waste sites and sewage treatment facilities in their area.^{[27][28]}

Processes such as suburbanization, gentrification, and decentralization lead to patterns of environmental racism. For example, the process of suburbanization (or white flight) consists of non-minorities leaving industrial zones for safer, cleaner, and less expensive suburban locales. Meanwhile, minority communities are left in the inner cities and in close proximity to polluted industrial zones. In these areas, unemployment is high and businesses are less likely to invest in area improvement, creating poor economic conditions

for residents and reinforcing a social formation that reproduces racial inequality.^[29] Furthermore, the poverty of property owners and residents in a municipality may be taken into consideration by hazardous waste facility developers since areas with depressed real estate values will cut expenses.^[30]

As a result of the placement of hazardous waste facilities, minority populations experience greater exposure to harmful chemicals and suffer from health outcomes that affect their ability at work and in schools. A comprehensive study of particulate emissions across the United States, published in 2018, found that Blacks were exposed to 54% more particulate matter emissions (soot) than the average American.^{[31][32]} Faber and Krieg found a correlation between higher air pollution exposure and low performance in schools and found that 92% of children at five Los Angeles public schools with the poorest air quality were of a minority background.^{[33][34]} School systems for communities heavily populated with minority families tend to provide "unequal educational opportunities" in comparison to school systems in predominantly white neighborhoods.^[35] Pollution consequently presents itself in these communities due to societal factors such as "underfunded schools, income inequality, and myriad egregious denials of institutional support" within the African American community.^[36]

Native American reservations

The Indian Removal Act of 1830 and the Trail of Tears may be considered early examples of environmental racism in the United States. By 1850, all tribes east of the Mississippi had been removed to western lands, essentially confining them to "lands that were too dry, remote, or barren to attract the attention of settlers and corporations".^[37] Later, during World War II, military facilities were often located conterminous to reservations, leading to a situation in which "a disproportionate number of the most dangerous military facilities are located near Native American lands".^[37]

More recently, Native American lands have been used for waste disposal and illegal dumping by the US and multinational corporations.^{[38][39]} The International Tribunal of Indigenous People and Oppressed Nations, convened in 1992 to examine the history of criminal activity against indigenous groups in the United States,^[40] and published a Significant Bill of Particulars outlining grievances indigenous peoples had with the US. This included allegations that the US "deliberately and systematically permitted, aided, and abetted, solicited and conspired to commit the dumping, transportation, and location of nuclear, toxic, medical, and otherwise hazardous waste materials on Native American territories in North America and has thus created a clear and present danger to the health, safety, and physical and mental well-being of Native American People".^[40]



A pile of American bison skulls – they were hunted almost to extinction in the 1870s. The United States Army encouraged these massive hunts to force Native Americans of their traditional lands and into reservations further west.

An ongoing issue for Native Americans activists is the Dakota Access Pipeline. The pipeline would start in North Dakota and travel to Illinois. Although it does not cross directly on a reservation, the pipeline is under scrutiny because it passes under a section of the Missouri river which is a key water source for Native American tribes including the Standing Rock Sioux Tribe. The pipeline also traverses a sacred burial ground for the Standing Rock Sioux.^[41] In 2017, Judge James Boasberg sided with the Standing Rock Sioux Tribe, citing the US Army Corps of Engineers failure to complete a study on the environmental impact of an oil spill in Lake Oahe.^{[42][43]}

Altgeld Gardens in Chicago, Illinois

Altgeld Gardens is a 6,000 unit public housing community located in south Chicago that was built in 1945 on an abandoned landfill to accommodate returning African American World War II veterans. Surrounded by 53 toxic facilities and 90% of the city's landfills, the Altgeld Gardens area became known as a "toxic doughnut."^[44] In Altgeld Gardens, 90% of its population are African-American

and 65% are below the poverty level.^[45] The known toxins and pollutants affecting the Altgeld Gardens area include mercury, ammonia gas, lead, dichlorodiphenyltrichloroethane (DDT), polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), heavy metals, and xylene.^[45]

In 1984, a study by Illinois Public Health Sector revealed excessive rates of prostate, bladder, and lung cancer.^[46] Additionally, as reported in the Organization for Economic Co-operation and Development's seminar on social and environment interface, medical records have indicated (1) high rates of children born with brain tumors, (2) high rates of fetuses that had to be aborted after tests revealed that the brains were developing outside the skull, and (3) higher rates of asthma, ringworm, and other ailments. Despite evidence of health problems, the residents of Altgeld Gardens have not been relocated to another public housing project.^[46]

Little Village in Chicago, Illinois

In Chicago's predominantly Latino neighborhoods such as Little Village, the array coal plants were contributors to respiratory diseases and other health complications during the early twenty-first century.^[47] In addition to air pollution, Little Village lacked safe outdoor recreational areas yet housed a County Jail that occupied 96 acres.^[48] Despite widespread displeasure among community members, the fact that Latino regions were primarily populated by working class citizens caused the demand for environmental and community improvement to inevitably come with joint fear of gentrification among activists.^[49] Some advocates still fought for environmental improvements regardless of their fear, and when their requests began to come to fruition, like the eventual increase in local green spaces, many residents were left feeling out of place in their homes, which could be attributed to shifts in factors like local police presences, local racial diversity and overall class of the townsfolk.^[50]

Warren County, North Carolina

Racism and environmental justice unified for the first time during the 1983 citizen opposition to a proposed PCB landfill in Warren County, North Carolina.^[51] Illegally, North Carolina state officials decided to bury soil contaminated with toxic polychlorinated biphenyls in Afton, a small town in Warren County.^[52] As a result, between June 1978 and August 1978, 30,000 gallons (114 m³) of polychlorinated biphenyls (PCB)-contaminated waste were illegally deposited along 210 miles of North Carolina roads. The U.S. Environmental Protection Agency (EPA) declared the PCBs a threat to public health and required the state to remove the polluted waste. In 1979, the North Carolina Department of Environment and Natural Resources and EPA Region 4 selected Warren County as the site to deposit the PCB-contaminated soil that was collected from the roadsides.^[51] Warren County is one of the six counties along the "black belt" of North Carolina. The counties residing in the "black belt" are significantly poorer than the rest of the state. In the early 1980s the residents in Warren County earned an average per capita income of \$6,984 compared to \$9,283 for the rest of the state.^[52] In 1980, the population of Warren County was 54.5% African-American.^[51]

In 1982, the local National Association for the Advancement of Colored People (NAACP) filed a lawsuit in the district courts to block the landfill. The residents lost the case in court.^[51] In September 1982, the outraged citizens of Warren County joined by civil rights groups, environmental leaders, and clergymen protested the first truckloads of PCB contaminated soil.^[53] During the protest, over 500 people were arrested and jailed. Despite protests and scientific evidence that the plan would cause drinking water contamination, the Warren County PCB Landfill was built and the toxic waste was placed in the landfill.^{[53][54]} After nearly two decades of suspected leaks, state and federal sources paid a contractor \$18 million to detoxify the PCB contaminated soil in Warren County.^[51] Warren County is often cited as the first environmental justice case in the United States; however, this movement started years earlier in 1978 with the discovery of toxic waste in Love Canal, New York.^[55]

Mexico City, Mexico

On November 19, 1984, the San Juanico disaster caused thousands of deaths and roughly a million injuries to poor surrounding neighborhoods. The disaster occurred at the PEMEX liquid propane gas plant in a densely populated area of Mexico City. The close proximity of illegally built houses that did not meet regulations worsened the effects of the explosion.^{[56][57]}

Homer, Forest Grove, and Center Springs, Louisiana

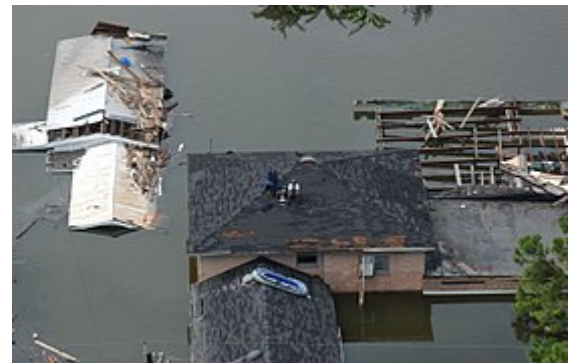
In 1989, the Louisiana Energy Services (LES), a British, German and American conglomerate, conducted a nationwide search to find the "best" site to build a privately owned uranium enrichment plant. The LES claimed to use an objective scientific method to select Louisiana as the "best" place to build the plant. In response to the selection, the communities of Homer, Forest Grove and Center Springs that are nearby the proposed site formed a group called Citizens against Nuclear Trash (CANT). With the help of the Sierra Club Legal Defense Fund (later changed to Earth Justice Legal Defense Fund), CANT sued LES for practicing environmental racism. Finally after 8 years, on May 1, 1997, a three-judge panel of the Nuclear Regulatory Commission's Atomic Safety and Licensing Board made their final initial decision. The panel found that racial bias did play a role in the selection process. In response to the victory, on May 11, 1997, the London Times declared, "Louisiana Blacks Win Nuclear War." The courts decision was also upheld on appeal on April 4, 1998.^[58]

Kelly Air Force Base in San Antonio, Texas

San Antonio's Kelly Air Force Base (KAFB) is one of the Air Force's major aircraft maintenance facilities and takes up 4000 acres of land, surrounded by residential neighborhoods of primarily Hispanic populations. KAFB maintains various parts of aircraft such as jet engines, and accessory components and even nuclear materials, generating as much as 282,000 tons of hazardous waste each year.^[59] Residents of the nearby communities have complained many times of unusual illnesses their children have experienced as well as respiratory illnesses and kidney disease.^{[60][61]} A 1997 survey done in the residential neighborhoods close to KAFB showed 91% of adults and 79% of children are suffering from conditions ranging from nose, ear, and throat issues to central nervous system disorders. Scientists released information in 1983 revealing that toxic waste had been dumped into an uncovered pit from 1960 to 1973. The waste in the pit contained various chemicals, such as PCB's and DDT that contaminated groundwater.^[62]

New Orleans, Louisiana

At the time of Hurricane Katrina, 60.5% of New Orleans residents were African American. Pre-existing racial disparities in wealth within New Orleans worsened the outcome of Hurricane Katrina for minority populations. Institutionalized racial segregation of neighborhoods left minority members more likely to live in low-lying areas that were more vulnerable to flooding.^{[63][64]} Additionally, hurricane evacuation plans relied heavily on the use of cars and did not prepare for people who relied on public transportation.^[65] Because minority populations are less likely to own cars, some people had no choice but to stay behind, while white majority communities were able to escape. A report commissioned by the U.S. House of Representatives found that political leaders failed to consider the fact that "100,000 city residents had no cars and relied on public transit", and the city's failure to complete its mandatory evacuation led to hundreds of deaths.^[66]



People on the roofs of their houses avoiding the flood

In the months following the disaster, political, religious, and civil rights groups, celebrities, and New Orleans residents spoke out against what they believed was racism on the part of the United States government.^[67] After the hurricane, in a meeting held between the Congressional Black Caucus, the National Urban League, the Black Leadership Forum, the National Council of Negro Women, and the NAACP, Black leaders criticized the response of the federal government calling it "slow and incomplete" and discussed the role of race in this response.^[68] With rising sea levels, lack of mobility of non-white populations in coastal cities like New Orleans foreshadow future unequal impacts of climate change and natural disasters on minority communities.^[69]

Flint, Michigan

Since April 2014, residents of Flint, a city that is almost 57 percent black and notably impoverished, have been drinking and bathing in water that contains enough lead to meet the Environmental Protection Agency's definition of "toxic waste". Before 2014 when the city of Flint switched to their own river as means of water, Lake Huron provided the area with water. Researchers at Virginia Tech discovered in 2015 that the Flint River is 19 times more corrosive than Lake Huron. Lead contamination can engender multiple

health conditions. A November 2015 class-action lawsuit describes how Michigan's Department of Environmental Quality (MDEQ) failed to treat the new water source with an anti-corrosive agent, thereby causing the water to become increasingly discolored. This was in violation of the Lead and Copper Rule and MDEQ did not correctly complete the Safe Drinking Water Act mandated lead assessments.^[70] Adding that agent (orthophosphate) would have cost \$100 per day, according to CNN, and 90 percent of the problems with Flint's water would have been averted if it had been used.^[71]

Generally the consumption of Lead is considered among the environmental problems and some of the ways people can be exposed to it is from the corrosion of old pipes, the dust from lead-based paint and gasoline has metal dust which contains lead; but the amount of lead in gasoline has been reduced and this contributed a lot when it comes to Lead exposure.^[72]

After an official investigation was conducted, Michigan's attorney general Bill Schuette initially filed charges against three government officials: two state officials of the Michigan Department of Environmental Quality, Michael Prysby and Stephen Busch, and a Flint city employee, Michael Glasglow, who was the city's water quality supervisor. They were brought up against felony charges such as "misconduct, neglect of duty, and conspiracy to tamper with evidence."^[73] They were also charged with violating the Michigan Safe Water Drinking Act.^[73]



2017 Climate March protestor holds up sign on the Flint water crisis

Chester, Pennsylvania

Chester, Pennsylvania, provides an example of "social, political, and economic forces that shape the disproportionate distribution of environmental hazards in poor communities of color."^[74] Chester is located in Delaware County, an area with a population of 500,000 that, excluding Chester is 91% white. Chester, however, is 65% African American, with the highest minority population and poverty rate in Delaware County,^[75] and recipient of a disproportionate amount of environmental risks and hazards.^[76] Chester has five large waste facilities including a trash incinerator, a medical waste incinerator, and a sewage treatment plant.^[75] These waste sites in Chester have a total permitted capacity of 2 million tons of waste per year while the rest of Delaware County has a capacity of merely 1,400 tons per year.^[77] One of the waste sites located in Chester is the Westinghouse incinerator, which burns all of the municipal waste from the entire county and surrounding states.^[74] These numerous waste facilities engender very significant health risks to the citizens of Chester, as the cancer rate in this area is 2.5 times higher than it is anywhere else in Pennsylvania.^[78] The mortality rate is 40% higher than the rest of Delaware county.^[74]

Louisiana's Chemical Corridor

Diamond, a small African American community, filed a lawsuit against Shell gas company after years of experiencing toxic emissions from the neighboring refinery.^[79] Shell offered to buy out the homes that the residents owned, however, the property value was so low that residents could not get new housing. Eventually after protesting and making the issue a public matter, Shell eventually agreed to relocate the residents (Lerner2005).^[80]

Wilmington, North Carolina

North Carolina is home to 31 coal ash pits that store an expected 111 million tons of harmful waste created by coal-fired power plants. It is also home to many excrement pits, referred to indirectly as "lagoons," that store roughly 10 billion pounds of wet waste created every year by swine, poultry, and dairy cattle in the state.^[81] North Carolina's mechanical hog tasks are firmly grouped in a couple of districts on the beach front plain that housed the most subjugated individuals preceding the Civil War. In the decades since, the area has held the state's densest populace of provincial African-American residents.^[82]

Wilmington, NC is usually one of the first cities hit by hurricanes off the Atlantic coast, and its environmental risks are increased by its proximity to hog farms, nuclear reactors, and coal-ash pits—one of which has already spilled over, due to Hurricane Florence in September 2018.^[83] Hog waste spills can be destructive to the individuals who live close to these pits and farms and a significant number of the neighbors are low-income ethnic minorities. African Americans have been battling for their justice in the port city. This can be traced to the Wilmington Rebellion of 1898, when whites stripped away black individuals' rights to cast a ballot and hold office through the power of force, in spite of the significant role African Americans play in building the greater part of the city's monuments. In 1971, racial strains over the absence of protection for African Americans in the threatening integration endeavors prompted a mob and resulted in the capture of several black activists who would later be known as the "Wilmington Ten." One of those activists, Benjamin Chavis would later turn into a significant figure in the environmental justice movement.^[84] Two studies of disease transmission analysts conducted at the University of North Carolina at Sanctuary Slope distributed a paper in 2014 titled: "Industrial Hog Operations in North Carolina Excessively Effect African-Americans, Hispanics and Native Americans."^[85] They expressed, "Flood of waste pits amid overwhelming precipitation occasions results in gigantic spills of animal waste into neighboring networks and conduits."^[86]

Europe

Exporting toxic wastes to countries in the Global South is one form of environmental racism that occurs on an international basis. In one alleged instance, the French aircraft carrier Clemenceau was prohibited from entering Alang, an Indian ship-breaking yard, due to a lack of clear documentation about its toxic contents. French President Jacques Chirac ultimately ordered the carrier, which contained tons of hazardous materials including asbestos and PCBs, to return to France.^[87]

Asia

Guiyu, China

From the mid-1990s until about 2001, it is estimated that some 50 to 80 percent of the electronics collected for recycling in the western half of the United States was being exported for dismantling overseas, predominantly to China and Southeast Asia.^{[88][89]} This scrap processing is quite profitable and preferred due to an abundant workforce, cheap labour, and lax environmental laws.^{[90][16]}

Guiyu, China is one of the largest recycling sites for e-waste, where heaps of discarded computer parts rise near the riverbanks and compounds, such as cadmium, copper, lead, PBDEs, contaminate the local water supply.^{[91][92]} Water samples taken by the Basel Action Network in 2001 from the Lianjiang River contained lead levels 190 times higher than WHO safety standards.^[16] Despite contaminated drinking water, residents continue to use contaminated water over expensive trucked-in supplies of drinking water.^[16] Nearly 80 percent of children in the e-waste hub of Guiyu, China, suffer from lead poisoning, according to recent reports.^[93] Before being used as the destination of electronic waste, most of Guiyu was composed of small farmers who made their living in the agriculture business.^[94] However, farming has been abandoned for more lucrative work in scrap electronics.^[94] "According to the Western press and both Chinese university and NGO researchers, conditions in these workers' rural villages are so poor that even the primitive electronic scrap industry in Guiyu offers an improvement in income!"^[95]

Bhopal, India

Union Carbide Corporation, is the parent company of Union Carbide India Limited which outsources its production to an outside country. Located in Bhopal, India, Union Carbide India Limited primarily produced the chemical methyl isocyanate used for pesticide manufacture.^[96] On December 3, 1984, a cloud of methyl isocyanate leaked as a result of the toxic chemical mixing with water in the plant in Bhopal.^[97] Approximately 520,000 people were exposed to the toxic chemical immediately after the leak.^[96] Within the first 3 days after the leak an estimated 8,000 people living within the vicinity of the plant died from exposure to the methyl isocyanate.^[96] Some people survived the initial leak from the factory, but due to improper care and improper diagnoses many have died.^[96] As a consequence of improper diagnoses, treatment may have been ineffective and this was precipitated by Union Carbide refusing to release all the details regarding the leaked gases and lying about certain important information.^[96] The delay in supplying

medical aid to the victims of the chemical leak made the situation for the survivors even worse.^[96] Many today are still experiencing the negative health impacts of the methyl isocyanate leak, such as lung fibrosis, impaired vision, tuberculosis, neurological disorders and severe body pains.^[96]

The operations and maintenance of the factory in Bhopal contributed to the hazardous chemical leak. The storage of huge volumes of methyl isocyanate in a densely inhabited area, was in contravention with company policies strictly practiced in other plants.^[98] The company ignored protests that they were holding too much of the dangerous chemical for one plant and built large tanks to hold it in a crowded community.^[98] Methyl isocyanate must be stored at extremely low temperatures, but the company cut expenses to the air conditioning system leading to less than optimal conditions for the chemical.^[98] Additionally, Union Carbide India Limited never created disaster management plans for the surrounding community around the factory in the event of a leak or spill.^[98] State authorities were in the pocket of the company and therefore did not pay attention to company practices or implementation of the law.^[98] The company also cut down on preventative maintenance staff to save money.^[98]

South America

Ecuador

Due to their lack of environmental laws, emerging countries like Ecuador have been subjected to environmental pollution, sometimes causing health problems, loss of agriculture, and poverty. In 1993, 30,000 Ecuadorians, which included Cofan, Siona, Huaorani, and Quichua indigenous people, filed a lawsuit against Texaco oil company for the environmental damages caused by oil extraction activities in the Lago Agrio oil field. After handing control of the oil fields to an Ecuadorian oil company, Texaco did not properly dispose of its hazardous waste, causing great damages to the ecosystem and crippling communities.^[99]



Aftermath of Lago Agrio oil field

Africa

Niger Delta, Nigeria

In Nigeria, near the Niger Delta, cases of oil spills, burning of toxic waste, and urban air pollution are problems in more developed areas. In the early 1990s, Nigeria was among the 50 nations with the world's highest levels of carbon dioxide emissions, which totaled 96,500 kilotons, a per capita level of 0.84 metric tons. The UN reported in 2008 that carbon dioxide emissions in Nigeria totaled 95,194 kilotons.^[100]

Numerous webpages were created in support of the Ogoni people, who are indigenous to Nigeria's oil-rich Delta region. Sites were used to protest the disastrous environmental and economic effects of Shell Oil drilling, to urge the boycotting of Shell Oil, and to denounce human rights abuses by the Nigerian government and by Shell. The use of the Internet in formulating an international appeal intensified dramatically after the Nigerian government's November 1995 execution of nine Ogoni activists, including Ken Saro-Wiwa, who was one of the founders of the nonviolent Movement for the Survival of the Ogoni People (MOSOP).^[101]

Addressing environmental racism

Environmental Racism can be traced back around 500 years with the arrival of the Europeans and their displacement of Native Americans. The Environmental Justice Movement, however, seems to be fairly recent having been rooted around the same time as the Civil Rights Movement. The Civil Rights Movement influenced the mobilization of people by echoing the empowerment and concern associated with political action^[102]. Here is where the civil rights agenda and the environmental agenda met. Despite this being the case, environmental organizations such as Sierra Club did distance themselves from cases such as the Warren County case likely because of their unwillingness to risk technical support when dealing with a very social issue.^[103]

Activists have called for "more participatory and citizen-centered conceptions of justice."^{[104][105]} The environmental justice (EJ) movement and climate justice (CJ) movement address environmental racism in bringing attention and enacting change so that marginalized populations are not disproportionately vulnerable to climate change and pollution. In the US, change must be made at the federal level, and enacted upon after being passed. This requires not only state and local agencies, but also the involvement of grassroots organizations.^{[106][4]} According to the United Nations Conference on Environment and Development, one possible solution is the precautionary principle, which states that "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."^[107] Under this principle, the initiator of the potentially hazardous activity is charged with demonstrating the activity's safety. Environmental justice activists also emphasize the need for waste reduction in general, which would act to reduce the overall burden.^[105]

Concentrations of ethnic or racial minorities may also foster solidarity, lending support in spite of challenges and providing the concentration of social capital necessary for grassroots activism. Citizens who are tired of being subjected to the dangers of pollution in their communities have been confronting the power structures through organized protest, legal actions, marches, civil disobedience, and other activities.^[108]

Racial minorities are often excluded from politics and urban planning (such as sea-level rise adaptation planning) so various perspectives of an issue are not included in policy making that may affect these excluded groups in the future.^[4] In general, political participation in African American communities is correlated with the reduction of health risks and mortality.^[109] Other strategies in battling against large companies include public hearings, the elections of supporters to state and local offices, meetings with company representatives, and other efforts to bring about public awareness and accountability^[110]

In addressing this global issue, activists take to various social media platforms to both raise awareness and call to action. The mobilization and communication between the intersectional grassroots movements where race and environmental imbalance meet has proven to be effective. The movement gained traction with the help of Twitter, Facebook, Instagram, and Snapchat among other platforms. Celebrities such as Shailene Woodley, who advocated against the Keystone XL Pipeline, have shared their experiences including that of being arrested for protesting. Social media has allowed for a facilitated conversation between peers and the rest of the world when it comes to social justice issues not only online but in face-to-face interactions correspondingly^[111].

Studies

Studies have been important in drawing associations and public attention by exposing practices that cause marginalized communities to be more vulnerable to environmental health hazards. The US GAO study in response to the 1982 protests against the PCB landfill in Warren County was among the first groundbreaking studies that drew correlations between the racial and economic background of communities and the location of hazardous waste facilities. Their study, "Siting of Hazardous Waste Landfills and Their Correlation with Racial and Economic Status of Surrounding Communities," revealed that "three of the four commercial hazardous waste landfills in the Southeast United States were located in majority black communities." However, the study was limited in scope by only focusing on off-site hazardous waste landfills in the Southeastern United States.^[112] In response to this limitation the United Church of Christ Commission for Racial Justice, or CRJ, directed a comprehensive national study on demographic patterns associated with the location of hazardous waste sites.^[112] The CRJ national study conducted two examinations of areas surrounding commercial hazardous waste facilities and the location of uncontrolled toxic waste sites.^[112] The first study examined the association between race and socio-economic status and the location of commercial hazardous waste treatment, storage, and disposal facilities.^[112] After statistical analysis, the first study concluded that "the percentage of community residents that belonged to a racial or ethnic group was a stronger predictor of the level of commercial hazardous waste activity than was household income, the value of the homes, the number of uncontrolled waste sites, or the estimated amount of hazardous wastes generated by industry".^[113] The second study examined the presence of uncontrolled toxic waste sites in ethnic and racial minority communities, and found that 3 out of every 5 African and Hispanic Americans lived in communities with uncontrolled waste sites.^[114] Other studies like the 1987 "Toxic Waste and Race in the United States" by the Commission for Racial Justice found race to be the most influential variable in predicting where waste facilities were located.^[115]

Deserting the Perpetrator - Victim Model of studying environmental justice issues, the Economic/Environmental Justice Model utilized a sharper lens to study the many complex factors, accompanied to race, that contributes to the act of environmental racism and injustice. Using this model the role of history and the overlapping of interest groups, stakeholders, and organizations are considered in case studies of environmental racism. For example, Lerner in *Diamond: A struggle for Environmental Justice in Louisiana's Chemical Corridor*^[116] not only revealed the role of race in the division of Diamond and Norco residents, but he also revealed the historical roles of the Shell Oil Company, the slave ancestry of Diamond residents, and of the history of white workers and families that were dependent upon the rewards of Shell. Involvement of outside organizations, such as the Bucket Brigade and Greenpeace, was also considered in the power that the Diamond community had when battling for environmental justice.

In wartimes, environmental racism can occur and are unearthed to the public through reports. Examining the Israeli-Palestine conflict, Friends of the Earth International's Environmental Nakba report brings attention to environmental racism that has occurred in the Gaza Strip. Some Israeli practices include cutting off three days of water supply to refugee Palestinians and destructing farms.^[117]

Besides studies that point out cases of environmental racism, studies have also provided information on how to go about changing regulations and preventing environmental racism from happening. In a study by Daum, Stoler and Grant on e-waste management in Accra, Ghana, the importance of engaging with different fields and organizations such as recycling firms, communities, and scrap metal traders, to name a few are emphasized over adaptation strategies such as bans on burning and buy-back schemes that have not caused much effect on changing practices.^{[118][119]}

Studies have also shown that since environmental laws have become prominent in the U.S. as well as Europe so companies have moved their waste towards the global south. The Third World has less of a focus on environmental concerns and therefore are susceptible to more discriminatory practices. This has not stopped activism however it has limited the effects activism has on political restrictions. As these activists push on there are still companies destroying land in these countries with harmful chemicals that are cheaper to use.^[120]

Activism

Manifestations of environmental racism predate the coining of such terminology. Before the 1970s, communities of color recognized this reality and organized against it. For example, the Black Panther Party organized survival programs that confronted the inequitable distribution of trash in predominantly black neighborhoods.^[121] Similarly, the Young Lords, a Puerto Rican revolutionary nationalist organization based in Chicago and New York City, protested pollution and toxic refuse present in their community via their Garbage Offensive program. These and other organizations also worked to confront the maldistribution of open spaces, toxic lead paint, and healthy food options.^[122] They also offered health programs to those affected by preventable, environmentally induced diseases such as tuberculosis.^[123] In this way, these organizations serve as precursors to more pointed movements against environmental racism.

Martin Luther King Jr. helped to bring light to the injustices done to many low-income neighborhoods and the working conditions of African-Americans. In the year before his assassination, Martin Luther King Jr. was in the midst of organizing a protest in Washington to create a bill to help the poor and homeless in the United States. After his assassination and even with the push of the Southern Christian Leadership Conference (SCLC), this bill would never come to pass.^[124] Latino ranch laborers composed by Cesar Chavez battled for working environment rights, including insurance from harmful pesticides in the homestead fields of California's San Joaquin Valley. In 1967, African-American underclass rioted in the streets of Houston to battle a city trash dump in their locale which had killed two kids. In 1968, occupants of ~~West~~ Harlem, in New York City, battled unsuccessfully against the siting of a sewage treatment plant in their neighborhood.^[125]

One approach in activism is promoting the development and manufacturing of renewable energy sources and the integration of health, economic and preparedness issues into climate policies. However, despite President Bill Clinton's executive order 12898, there remains differences between policy and action that advocacy groups continue to address.^[126]

With time environmental justice and civil rights movements fused together and as a result environmental justice organizations stood up for more ethnic groups and this increased diversity within the organization. The fusion is very logical since the people who suffer the most are minority groups. One of the main environmental problems that minority groups suffer from is uncontrolled toxic wastes. The factor that initiated environmental justice is the relationship between the geography of minority groups and hazardous waste landfills.^[127]

When environmental racism became acknowledged in the US society, it stimulated the environmental justice social movement that gained wave throughout the 1970s and 1980s in the US. Historically, the term environmental racism has had ties with the environmental justice movement. However, this has changed with time to the extent it is believed to lack any associations with the movement. Grassroots organizations and campaigns have sprung up in response to this environmental racism with these groups mainly demanding the inclusion of minorities when it comes to policy making involving the environment. It is also worth noting that this concept is international despite being coined in the US. A perfect example is when the United States exported its hazardous wastes to the poor nations in the Global South because they knew that these countries had lax environmental regulations and safety practices. Marginalized communities are usually at risk of environmental racism because they resource and means to oppose the large companies that dump these dangerous wastes.^[128] As already stated, environmental racism is international, implying that it not only occurs in the United States.

Policies and International agreements

The export of hazardous waste to third world countries is another growing concern. Between 1989 and 1994, an estimated 2,611 metric tons of hazardous waste was exported from Organization for Economic Cooperation and Development (OECD) countries to non-OECD countries. Two international agreements were passed in response to the growing exportation of hazardous waste into their borders. The Organization of African Unity (OAU) was concerned that the Basel Convention adopted in March 1989 did not include a total ban on the trans-boundary movement on hazardous waste. In response to their concerns, on January 30, 1991, the Pan-African Conference on Environmental and Sustainable Development adopted the Bamako Convention banning the import of all hazardous waste into Africa and limiting their movement within the continent. In September 1995, the G-77 nations helped amend the Basel Convention to ban the export of all hazardous waste from industrial countries (mainly OECD countries and Lichtenstein) to other countries.^[129]

With globalization and the increase in transnational agreements, introduce possibilities for cases of environmental racism. For example, the 1994 North American Free Trade Agreement (NAFTA) attracted US-owned factories to Mexico, where toxic waste was abandoned in the Colonia Chilpancingo community and was not cleaned up until activists called for the Mexican government to clean up the waste.^[6]

In the US, the environmental justice movement uses the Civil Rights Act (CRA) of 1964 to combat environmental racism in legal cases. For example, the CRA was used in the 1994 lawsuit against the Los Angeles County Metropolitan Transit Authority which failed to provide services for poor LA County residents.^[106] In Canada, progress is being made to address environmental racism (especially in Nova Scotia's Africville community) with the passing of Bill 111, An Act to Address Environmental Racism in the Nova Scotia Legislature.^[106]

In response to fatal diesel pollution in the air around ports in Los Angeles and Long Beach in 2006, the San Pedro Bay Ports Clean Air Action Plan, or CAAP, was passed.^[130] The action plan was created to reduce pollution caused by ports; specifically, it demanded a 45% decrease in pollution once the proposal was put into action.^[131] Another layer of the plan's objective was to reduce negative environmental impacts from trucks with the initial plans for the Clean Truck Program (CTP), which intended to cut back on the use of shipping trucks from the docks and instead called for purer options like rail yards and warehouses that could hopefully improve the air quality.^[132]

See also

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- Antiziganism#Environmental struggles
 - Cancer Alley

- Climate change and poverty
- Economic inequality
- Electronic waste
- Environmental inequality in the United Kingdom
- Environmental justice
- Environmental policy of the United States
- Environmental racism in Europe
- Internalized racism
- NIMBY
- Environmental dumping
- Hawks Nest Tunnel Disaster
- Health inequality and environmental influence
- Intergenerational equity
- Planned shrinkage the deliberate removal of city services from impoverished neighborhoods
- Pollution in the United States#Environmental Discrimination
- Race and health
- Social inequality
- Triangle of Death
- Uranium mining and the Navajo people

References

1. Bullard, Robert D. (2001). "Environmental Justice in the 21st Century: Race Still Matters". *Phylon* (1960-). **49** (3/4): 151–171. doi:10.2307/3132626 (https://doi.org/10.2307%2F3132626) JSTOR 3132626 (https://www.jstor.org/stable/3132626).
2. Chavis, Jr., Benjamin F., and Charles Lee, "Toxic Wastes and Race in the United States," United Church of Christ Commission for Racial Justice, 1987
3. Office, U.S. Government Accountability (198306-14). "Siting of Hazardous Waste Landfills and Their Correlation With Racial and Economic Status of Surrounding Communities" (https://www.gao.gov/products/RCED-83-168) (RCED-83-168).
4. Hardy, Dean; Milligan, Richard; Heynen, Nik (2017). "Racial coastal formation: The environmental injustice of colorblind adaptation planning for sea-level rise" (https://www.sciencedirect.com/science/article/pii/S0016718517302944). *Geoforum*. **87**: 62–72. doi:10.1016/j.geoforum.2017.10.005 (https://doi.org/10.1016%2Fj.geoforum.2017.10.005) – via Elsevier.
5. Park, Rozelia (1998). "An Examination of International Environmental Racism Through the Lens of Transboundary Movement of Hazardous Wastes" (http://www.repository.law.indiana.edu/ijgls/vol5/iss2/14). *Indiana Journal of Global Legal Studies*. **5** – via Jerome Hall Law Library
6. Mohai, Paul; Pellow David; Roberts, J. Timmons (2009). "Environmental Justice" *Annual Review of Environment and Resources*. **34**: 405–430. doi:10.1146/annurev-environ-082508-094348 (https://doi.org/10.1146%2Fannurev-environ-082508-094348)
7. Chae, David H. (2018). "Area racism and birth outcomes among Blacks in the United States" *Social Science & Medicine*. **199**: 49–55.
8. Holifield, Ryan (2001). "Defining Environmental Justice and Environmental Racism." *Urban Geography*. Milwaukee: V. H. Winston & Son, Inc. pp. 78–90.
9. Melosi, Martin (1995). "Equity eco-racism and environmental history". *Environmental History Review* **19** (3): 1–16. doi:10.2307/3984909 (https://doi.org/10.2307%2F3984909) JSTOR 3984909 (https://www.jstor.org/stable/3984909)
10. Ulezaka, Tara. Race and Waste: The Quest for Environmental Justice. *Temple Journal of Science Technology & Environmental Law*
11. Perez, Alejandro; Grafton, Bernadette; Mohai, Paul; Harden, Rebecca; Hintzen, Katy; Orvis, Sara (October 2015). "Evolution of the environmental justice movement: activism, formalization and differentiation". *Environmental Research Letters* **10** (10): 105002. doi:10.1088/1748-9326/10/10/105002 (https://doi.org/10.1088%2F1748-9326%2F10%2F10%2F105002)
12. Dicochea, Perlita R. (2012). "Discourses of Race & Racism within Environmental Justice Studies: An Eco-Racial Intervention". *Ethnicity and Race in a Changing World* **3** (2): 18–29 – via ProQuest.

13. United States of America. Environmental Justice Group. National Conference of State Legislatures. Environmental Justice: A Matter of Perspective. 1995
14. "Presidential Documents"(<https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>)(PDF). *Federal Register*. 1994 – via National Archives.
15. "Environmentalism's Racist History"(<https://www.newyorker.com/news/news-desk/environmentalisms-racist-history>) *The New Yorker*. Retrieved 2018-10-19.
16. Grossman, Elizabeth, *High Tech Trash: Digital Devices, Hidden Toxics, and Human Health*(Washington: Island Press, 2006), 185.
17. Laurent, Éloi (2011-09-15). "Issues in environmental justice within the European Union"(<https://www.sciencedirect.com/science/article/pii/S0921800911002722>) *Ecological Economics* **70** (11): 1846–1853. doi:10.1016/j.ecolecon.2011.06.025(<https://doi.org/10.1016%2Fj.ecolecon.2011.06.025>) ISSN 0921-8009 (<https://www.worldcat.org/issn/0921-8009>)
18. "Cost-Benefit Analysis (CBA)"(<http://go.worldbank.org/2C1D1VKF80>) World Bank Group. n.d. Accessed: November 20, 2011.
19. Westra, Laura, and Bill E. Lawson. *Faces of Environmental Racism: Confronting Issues of Global Justice*. Lanham, MD: Rowman & Littlefield, 2001.
20. Bullard, Robert (Spring 1994). "The Legacy of American Apartheid and Environmental Racism"(<https://scholarship.law.stjohns.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1460&context=jcred>) *Journal of Civil Rights and Economic Development* **9** – via St. John's University School of Law
21. https://scholarworks.umass.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1004&context=anthro_faculty_pubs
22. Saha, Robin. 2010. "Environmental Racism". In *Encyclopedia of Geography*, ed. Barney Warf, Sage Publications, doi:10.4135/9781412939591.n379(<https://doi.org/10.4135%2F9781412939591.n379>)
23. <https://www.repository.law.indiana.edu/cgi/viewcontent.cgi?article=1138&context=ijgls>
24. GAO. 1983. "Siting of Hazardous Waste Landfills and Their Correlation with Racial and Economic Status of Surrounding Communities"(<http://archive.gao.gov/d48t13/121648.pdf>) U.S. Government Accountability Office, Washington, DC.
25. Colquette, Kelly Michele; Henry Robertson, Elizabeth A. (1991). "Environmental Racism: The Causes, Consequences, and Commendations". *Tulane Environmental Law Journal* **5** (1): 168.
26. Bullard, Robert D.; Mohai, Paul; Saha, Robin; Wright, Beverly (March 2007). "Toxic Wastes and Race at Twenty: 1987-2007" (<https://web.archive.org/web/20070709223812/http://www.ejrc.cau.edu/TWART-light.pdf>) (PDF). United Church of Christ. Archived from the original (<http://www.ejrc.cau.edu/TWART-light.pdf>) (PDF) on 2007-07-09. Retrieved 2008-03-28.
27. Fisher M. 1995. Environmental Racism Claims brought under the title VI of the Civil Rights Act.
28. Bryant, Bunyan. "Introduction." *Environmental justice issues, policies, and solutions* Washington, D.C: Island, 1995. 1-7.
29. Pulido, Laura (2000). "Rethinking Environmental Racism: White Privilege and Urban Development in Southern California". *Annals of the Association of American Geographers* **90** (1): 12–40. doi:10.1111/0004-5608.00182(<https://doi.org/10.1111%2F0004-5608.00182>) hdl:10214/1833 (<https://hdl.handle.net/10214%2F1833>)
30. Colquette and Robertson, 174.
31. Mikati, Ihab; Adam F Benson; Thomas J. Luten; Jason D. Sacks; Jennifer Richmond-Bryant (2018). "Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status"(<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5844406>) *American Journal of Public Health* **108** (4): 480–485. doi:10.2105/AJPH.2017.304297(<https://doi.org/10.2105%2FAJPH.2017.304297>) PMC 5844406 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5844406>) PMID 29470121 (<https://www.ncbi.nlm.nih.gov/pubmed/29470121>).
32. Geiling, Natasha (23 February 2018). "EPA study shows dangerous air pollution overwhelmingly impacts communities of color"(<https://thinkprogress.org/59fe867d560d/>) *Think Progress*.
33. Massey, Rachel (2004). *Environmental Justice: Income, Race, and Health* Medford, MA: Global Development and Environment Institute.

34. Faber, Daniel R; Krieg, Eric J (2002). "Unequal exposure to ecological hazards: environmental injustices in the Commonwealth of Massachusetts"(<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1241174>). *Environmental Health Perspectives*. **110** (suppl 2): 277–288. doi:10.1289/ehp.02110s2277(<https://doi.org/10.1289%2Fehp.02110s2277>) ISSN 0091-6765 (<https://www.worldcat.org/issn/0091-6765>) PMC 1241174 (<https://www.ncbi.nlm.nih.gov/pmc/article/s/PMC1241174>) PMID 11929739 (<https://www.ncbi.nlm.nih.gov/pubmed/11929739>).
35. Turner, Rita. "The Slow Poisoning of Black Bodies: A Lesson in Environmental Racism and Hidden Violence." *Meridians: feminism, race, transnationalism*, vol. 15, no. 1, 2016, p. 189+. Literature Resource Center <http://go.galegroup.com/ps/anonymouse?id=GALE%7CA486754206> Accessed 27 Nov 2018.
36. Turner, 2016.
37. Hooks, Gregory; Smith, Chad L. (2004). "The Treadmill of Destruction: National Sacrifice Areas and Native Americans". *American Sociological Review* **69** (4).
38. Goldtooth, Tom. "Indigenous Nations: Summary of Sovereignty and Its Implications for Environmental Protection." *Environmental justice issues, policies, and solutions*. Ed. Robert Bullard. Washington, D.C: Island, 1995. 115-23
39. Brook, Daniel (1998). "Environmental Genocide: Native Americans and Toxic Waste". *American Journal of Economics and Sociology* **57** (1).
40. Boyle, Francis A. (September 18, 1992). "Indictment of the Federal Government of the U.S. for the commission of international crimes and petition for orders mandating its proscription and dissolution as an international criminal conspiracy and criminal organization"(<http://www.hartford-hwp.com/archives/41/38.html>). Accessed November 6, 2012.
41. Worland, Justin. "What to Know about the Dakota Access Pipeline Protests"(<http://time.com/4548566/dakota-access-pipeline-standing-rock-sioux/>) *Time.com*. Retrieved 8 November 2016.
42. Meyer, Robinson (2017-06-14). "The Standing Rock Sioux Claim 'Victory and Vindication' in Court"(<https://www.theatlantic.com/science/archive/2017/06/dakota-access-standing-rock-sioux-victory-court/530427/>) *The Atlantic*. Retrieved 2018-10-20.
43. "Civil Action No. 16-1534"(<https://earthjustice.org/sites/default/files/files/DAPL-ordepdf>) (PDF). *Earth Justice*. 2017. Retrieved Oct 19, 2018.
44. Gaylord, Clarice; Twitty, Geraldine (1994). "Protecting Endangered Communities"(https://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?article=1409&context=ulj&sei-redir=1&referer=https%253A%252F%252Fscholar.google.com%252Fscholar%253Fhl%253Den%2526as_sdt%253D0%25252C44%2526as_vis%253D1%2526q%253Daltgeld%252Bgardens%2526btnG%253D#search=%22altgeld%20gardens%22) *Fordham Urban Law Journal* **21** – via The Fordham Law Archive of Scholarship and History
45. People for Community Recovery (PCR), Altgeld Gardens(<https://web.archive.org/web/20070918131001/http://www.geology.wisc.edu/~wang/EJBaldwin/PCR/>) Retrieved March 23, 2010.
46. "OECD Seminar Sept. 1999"(<http://www.oecd.org/dataoecd/51/15/3384818.pdf#page=27>) (PDF). Retrieved 2 December 2011.
47. Leslie Kern & Caroline Kovesi (2018) Environmental justice meets the right to stay put: mobilising against environmental racism, gentrification, and xenophobia in Chicago's Little Village (<https://www.tandfonline.com/doi/full/10.1080/13549839.2018.1508204>) *Local Environment*, 23:9, 952-966, DOI: 10.1080/13549839.2018.1508204
48. Kern, et al. 2018, p. 954.
49. Kern, et al. 2018, p. 953.
50. Kern, et al. 2018, p. 960.
51. Bullard, Robert D. (2004). *Environmental Racism: PCB Landfill Finally Remedied, but no Reparations for Residents* (<https://web.archive.org/web/20110929220957/http://www.ejrc.cau.edu/warren%20county%20rdb.htm>) South End Press. Archived from the original (<http://www.ejrc.cau.edu/warren%20county%20rdb.htm>) on 29 September 2011 Retrieved 19 November 2011.
52. Colquette and Robertson, 157.
53. Cutter, Susan (1995). "Race, Class, and Environmental Justice"(https://web.archive.org/web/20120426012710/http://geographyssc.uwo.ca/faculty/baxterj/readings/Cutter_environmental_justice_PIHG_1995.pdf) (PDF). *Progress in Human Geography*. **19** (1): 111–122. doi:10.1177/030913259501900111(<https://doi.org/10.1177%2F030913259501900111>). Archived from the original (http://geographyssc.uwo.ca/faculty/baxterj/readings/Cutter_environmental_justice_PIHG_1995.pdf) (PDF) on 2012-04-26.
54. "The Environmental Justice Movement"(<http://www.nrdc.org/ej/history/hej.asp>) NRDC. Retrieved 2010-04-24.

55. Moseley, William; Perramond, Eric; Hapke, Holly; Laris, Paul (2014). *An Introduction to Human-Environment Geography*. UK: Wiley Blackwell. p. 170. ISBN 9781405189316 "Although Warren County is often cited as the first environmental justice case in the US, the seeds of the new movement were likely planted a few years earlier with the hysteria created by the discovery of toxic waste at Love Canal, New York."
56. Shroeder, Richard; Kevin, St. Martin; Wilson, Bradley; Sen, Debarati (2009). "Third World Environmental Justice". *Third World Environmental Justice* **21**: 547–55.
57. Arturson, G. (1987-04-01). "The tragedy of San Juanico—the most severe LPG disaster in history" (<https://www.sciencedirect.com/science/article/abs/pii/0305417987900969>) *Burns*. **13** (2): 87–102. doi:10.1016/0305-4179(87)90096-9 (<https://doi.org/10.1016%2F0305-4179%2887%2990096-9>) ISSN 0305-4179 (<https://www.worldcat.org/issn/0305-4179>).
58. Bullard, Robert (September 2001). "Confronting Environmental Racism in the 21st Century".
59. "Kelly Air Force Base: San Antonio's Dumping Ground" (<http://www.txpeer.org/toxictour/kelly.html>), Txpeer.Org, 2017. Accessed November 16, 2017.
60. "Silenced Voices From The Toxic Triangle" (<https://www.sacurrent.com/sanantonio/silenced-voices-from-the-toxic-triangle/Content?oid=2377190>) *San Antonio Current*, 2009. Accessed November 16, 2017.
61. "Report of the Environmental Justice Enforcement and Compliance Assurance Roundtable" (<https://www.epa.gov/sites/production/files/2015-02/documents/roundtable-enf-1096.pdf>) (PDF). *Report of the Enforcement Roundtable 4*. 1996 – via Environmental Protection Agency
62. *Atsdr.Cdc.Gov* (https://www.atsdr.cdc.gov/hac/pha/KellyAFB-PC102804/KellyAFB_Onbase_Drinking_Water.pdf), 2017.
63. Henkel, Kristin. "Institutional Discrimination, Individual Racism, and Hurricane Katrina" (<http://cretscmhd.psych.ucla.edu/nola/Volunteer/EmpiricalStudies/Institutional%20discrimination,%20individual%20racism,%20and%20hurricane%20katrina.pdf>) (PDF).
64. Adeola, Francis; Picou, Steven (2017). "Hurricane Katrina-linked environmental injustice: race, class, and place differentials in attitudes". *Disasters*. **41** – via Wiley-Blackwell.
65. Bullard, Robert (Fall 2008). "Differential Vulnerabilities: Environmental and Economic Inequality and Government Response to Unnatural Disasters". *Social Research* **75** (3): 753–784. CiteSeerX 10.1.1.455.4789 (<https://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.455.4789>) JSTOR 40972088 (<https://www.jstor.org/stable/40972088>)
66. Hsu, Spencer (February 12, 2006). "Katrina Report Spreads Blame" (<https://www.washingtonpost.com/wp-dyn/content/article/2006/02/11/AR2006021101409.html>) *The Washington Post*
67. John Broder (September 5, 2005). "Amid Criticism of Federal Efforts, Charges of Racism are Lodged". *The New York Times*. Missing or empty |url= (help)
68. "Black lawmakers angry at Bush response to Katrina" (<http://www.indybay.org/newsitems/2005/09/02/17645181.php>)
69. Hardy, R. Dean; Milligan, Richard A.; Heyne, Nik (2017-12-01). "Racial coastal formation: The environmental injustice of colorblind adaptation planning for sea-level rise" (<https://www.sciencedirect.com/science/article/pii/S0016718517302944>) *Geoforum*. **87**: 62–72. doi:10.1016/j.geoforum.2017.10.005 (<https://doi.org/10.1016%2Fj.geoforum.2017.10.005>) ISSN 0016-7185 (<https://www.worldcat.org/issn/0016-7185>)
70. Venkataraman, Bhawani (2017-12-29). "The Paradox of Water and the Flint Crisis". *Environment: Science and Policy for Sustainable Development* **60** (1): 4–17. doi:10.1080/00139157.2018.1397466 (<https://doi.org/10.1080%2F00139157.2018.1397466>) ISSN 0013-9157 (<https://www.worldcat.org/issn/0013-9157>)
71. Craven, Julia; Tynes, Tyler (2016-02-03). "The Racist Roots Of Flint's Water Crisis" (http://www.huffingtonpost.com/entry/racist-roots-of-flints-water-crisis_us_56b12953e4b04f9b57d7b118) *Huffington Post* Retrieved 8 November 2016.
72. Macey, Gregg P. (2001). "An Investigation of Environmental Racism Claims: Testing Environmental Management Approaches with a Geographic Information System" *Environmental Management* **27** (6): 893–907. PMID 11393323 (<https://www.ncbi.nlm.nih.gov/pubmed/11393323>) – via ProQuest.
73. "Lead-Laced Water In Flint: A Step-By-Step Look At The Makings Of A Crisis" (<https://www.npr.org/sections/thetwo-way/2016/04/20/465545378/lead-laced-water-in-flint-a-step-by-step-look-at-the-makings-of-a-crisis>) *PR.org*. Retrieved 2017-12-06.
74. Cole, Luke and Foster, Sheila. 2001. *From the Ground Up: Environmental Racism and the Rise of Environmental Justice Movement* New York: New York University Press.
75. Watson, Traci (June 9, 1998). "Justices to hear environmental racism case" *USA Today*.

76. "The Case for Environmental Justice in Chester Pennsylvania" (<http://www.movementech.org/gis/pdf/chester.pdf>) (PDF). Movement Technology Institute.
77. Nussbaum, Paul (July 28, 1998). "On the bus for eco-tour of ChesterThe aim: see if the city has suffered from 'environmental racism', then advise the EPA". *The Philadelphia Inquirer*
78. Moran, Robert (April 23, 1996). "Students cry foul on waste plants. Chester city has a disproportionate number they said. They blamed 'environmental racism'". *The Philadelphia Inquirer*
79. Colten, Craig E. (2006-10-05). "Diamond: A Struggle for Environmental Justice in Louisiana's Chemical Corridor (review)" (<https://muse.jhu.edu/article/204181>) *Southeastern Geographer* **46** (2): 330–331. doi:10.1353/sgo.2006.0020(<https://doi.org/10.1353%2Fsgo.2006.0020>) ISSN 1549-6929 (<https://www.worldcat.org/issn/1549-6929>)
80. Lerner, Steve (2005). *Diamond: A Struggle for Environmental Justice in Louisiana's Chemical Corridor* Cambridge, MA: The MIT Press.
81. "Here's a Hurricane Florence environmental justice story that media outlets need to tell(<https://www.mediamatters.org/blog/2018/09/13/Heres-a-Hurricane-Florence-environmental-justice-story-that-media-outlets-need-to-tell/221293>) *Media Matters for America* 2018-09-12 Retrieved 2018-10-10.
82. "Here's a Hurricane Florence environmental justice story that media outlets need to tell(<https://www.mediamatters.org/blog/2018/09/13/Heres-a-Hurricane-Florence-environmental-justice-story-that-media-outlets-need-to-tell/221293>) *Media Matters for America* 2018-09-12 Retrieved 2018-10-10.
83. "8 Places That Provide a Roadmap for Fighting for Environmental Justice(<https://www.citylab.com/equity/2018/09/mapping-where-environmental-justice-is-most-threatened-in-the-carolinas/570985/>) *CityLab*. Retrieved 2018-10-10.
84. "8 Places That Provide a Roadmap for Fighting for Environmental Justice(<https://www.citylab.com/equity/2018/09/mapping-where-environmental-justice-is-most-threatened-in-the-carolinas/570985/>) *CityLab*. Retrieved 2018-10-10.
85. Wing, Steve (2014). "Industrial Hog Operations in North Carolina Disproportionately Impact African-Americans, Hispanics and American Indians"(<http://www.ncpolicywatch.com/wpcontent/uploads/2014/09/UNC-Report.pdf>) (PDF). *UNC Report* – via NC Policy Watch.
86. "Here's a Hurricane Florence environmental justice story that media outlets need to tell(<https://www.mediamatters.org/blog/2018/09/13/Heres-a-Hurricane-Florence-environmental-justice-story-that-media-outlets-need-to-tell/221293>) *Media Matters for America* 2018-09-12 Retrieved 2018-10-10.
87. Ahmed, Zubair (2006-01-06). "Stay out, India tells toxic ship"(http://news.bbc.co.uk/2/hi/south_asia/4588922.stm) BBC News. Retrieved 2012-11-06.
88. Grossman, 189.
89. Huo, Xia; Peng, Lin; Xu, Xijin; Zheng, Liangkai; Qiu, Bo; Qi, Zongli; Zhang, Bao; Han, Dai; Piao, Zhongxian (2007). "Elevated Blood Lead Levels of Children in Guiyu, an Electronic Waste Recycling Town in China" (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1913570>) *Environmental Health Perspectives* **115** (7): 1113–1117. doi:10.1289/ehp.9697 (<https://doi.org/10.1289%2Fehp.9697>) ISSN 0091-6765 (<https://www.worldcat.org/issn/0091-6765>). PMC 1913570 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1913570>). PMID 17637931 (<https://www.ncbi.nlm.nih.gov/pubmed/17637931>)
90. Grossman, 194.
91. Grossman, 184.
92. Shi, Jingchu; Zheng, Gene; Wong, Ming-Hung; Liang, Hong; Li, Yuelin; Wu, Yinglin; Li, Ping; Liu, Wenhua (2016). "Health risks of polycyclic aromatic hydrocarbons via fish consumption in Haimen bay (China), downstream of an e-waste recycling site (Guiyu)"(<https://www.sciencedirect.com/science/article/pii/S0013935116300366>) *Environmental Research*. **147**: 223–240 – via Elsevier.
93. Garber, Kent (December 20, 2007). "Technology's Morning After"(https://www.usnews.com/articles/news/2007/12/20/technologys-morning-after.html?s_cid=rss:technologys-morning-after.html). *US News & World Report* Retrieved 2012-11-06.
94. Grossman, 187.
95. Grossman, 186-187.
96. Das Gupta, Aruna and Ananda Das Gupta, "Corporate Social Responsibility in India: Towards a Sane Society?", *Social Responsibility Journal* Volume 4, Issue 1 (2008): 213.
97. LaBar, Gregg, "Citizen Carbide?", *Occupational Hazards* Volume 53, Issue 11 (1991): 33.
98. Das Gupta, Aruna and Ananda Das Gupta, "Corporate Social Responsibility in India: Towards a Sane Society?", *Social Responsibility Journal* Volume 4, Issue 1 (2008) 214.

99. Copland, Liesl; Kamen, Jon; Berlinger Joe. 2009. *Crude: The Real Price of Oil*; United States. Entendre Films, Red Envelope Entertainment.
100. Gall, Timothy; Derek, Gleason (2012). *Worldmark Encyclopedia of the Nations* Detroit: Gale, Cengage Learning. p. 545.
101. Spitulnik, Debra (2011). *Small Media Against Big Oil (Nigeria)* Thousand Oaks: SAGE Publications, Inc. p. 459.
102. Cole, Luke W; Foster, Sheila R. (2001). *From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement* (<https://books.google.com/?id=R6rj8XMSjx4C&pg=PR11&dq=environmental+racism+outrage#v=onepage&q=environmental%20racism%20outrage&f=false>) NYU Press. ISBN 9780814715376
103. McGurty, Eileen Maura (1997). "From NIMBY to Civil Rights: The Origins of the Environmental Justice Movement". *Environmental History* 2 (3): 301–323. doi:10.2307/3985352 (<https://doi.org/10.2307%2F3985352>) JSTOR 3985352 (<https://www.jstor.org/stable/3985352>)
104. Checker, Melissa. 2005. *Polluted Promises: Environmental Racism and the Search for Justice in a Southern Town*. New York: New York University Press, pp. 122-123
105. Checker, Melissa. "Withered Memories: Naming and Fighting Environmental Racism in Georgia." In *New Landscapes of Inequality: Neoliberalism and the Erosion of Democracy in America* eds. Jane L. Collins, Micaela di Leonardo, and Brett Williams. Santa Fe, NM: School for Advanced Research Press.
106. Lee, Jan (June 6, 2013). "Understanding Environmental Justice Policies" (<https://www.triplepundit.com/special/skeo-environmental-justice/environmental-justice-policies/>) *Triple Pundit* Retrieved November 12, 2018.
107. UNCED. (5-16 June 1972). "Rio Declaration on Environment and Development", United Nations Environment Programme (<http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=78&ArticleID=1163>)
108. Weintraub, I. 1994. "Fighting Environmental Racism: A Selected Annotated Bibliography" (<http://escholarship.org/uc/item/1qx663rf.pdf>) *Electronic Green Journal* Issue 1.
109. Gee, Gilbert C.; Payne-Sturges, Devon C. (2004) "Environmental Health Disparities: A Framework Integrating Psychosocial and Environmental Concepts" (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1253653>). *Environmental Health Perspectives* 112 (17): 1645–1653. doi:10.1289/ehp.7074 (<https://doi.org/10.1289%2Fehp.7074>). PMC 1253653 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1253653>). PMID 15579407 (<https://www.ncbi.nlm.nih.gov/pubmed/15579407>)
110. Bullard, Robert D. 1990. *Dumping in Dixie: Race, Class, and Environmental Equity* Boulder, CO: Westview Press, p. 165.
111. Hodges, Heather E.; Stocking, Galen (2015-11-01). "A pipeline of tweets: environmental movements' use of Twitter in response to the Keystone XL pipeline" *Environmental Politics* 25 (2): 223–247. doi:10.1080/09644016.2015.1105177 (<https://doi.org/10.1080%2F09644016.2015.1105177>) ISSN 0964-4016 (<http://www.worldcat.org/issn/0964-4016>)
112. Colquette and Robertson, 159.
113. Colquette and Robertson, 159-160.
114. Colquette and Robertson, 159-161.
115. Godsil, Rachel D. (1991). "Remedying Environmental Racism" *Michigan Law Review* 90: 394–395.
116. Lerner, Steve (2005). *Diamond: A Struggle for Environmental Justice in Louisiana's Chemical Corridor (Urban and Industrial Environments)* Cambridge, Massachusetts: The MIT Press ISBN 978-0-262-62204-2
117. "Beyond the US Borders: The Palestinian – Israeli Case | Environmental Leadership, Action and Ethics" (<https://edblogs.columbia.edu/scppx3335-001-2014-1/2014/04/02/beyond-the-us-borders-the-palestinian-israeli-case/#more-354>). *edblogs.columbia.edu* Retrieved 2018-11-13.
118. Daum, Kurt; Stoler, Justin; Grant, Richard J. (2017). "Toward a More Sustainable Trajectory for E-Waste Policy: A Review of a Decade of E-Waste Research in Accra, Ghana" (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5334689>). *International Journal of Environmental Research and Public Health* 14 (2): 135. doi:10.3390/ijerph14020135 (<https://doi.org/10.3390%2Fijerph14020135>) ISSN 1661-7827 (<https://www.worldcat.org/issn/1661-7827>) PMC 5334689 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5334689>). PMID 28146075 (<https://www.ncbi.nlm.nih.gov/pubmed/28146075>).
119. "Environmental Nakba" (<https://www.foei.org/wp-content/uploads/2018/10/06-foei-palestine-report-eng-lp.pdf>) (PDF). *Friends of the Earth International Report* September 2013.
120. Schroeder, Richard; Martin, Kevin St.; Wilson, Bradley; Sen, Debarati (2008). "Third World Environmental Justice". *Society & Natural Resources* 21 (7): 547–555. doi:10.1080/08941920802100721 (<https://doi.org/10.1080%2F08941920802100721>)

121. (1973). The Black Panther Retrieved from http://www.itsabouttimebpp.com/Survival_Programs/pdf/Survival_Programs.pdf
122. Enck-Wanzer, D. (2010). *The Young Lords: A Reader*. New York: New York University Press
123. Enck-Wanzer, D. (2010). *The Young Lords: A Reader*. New York: New York University Press
124. "Martin Luther King Jr: 8 peaceful protests that bolstered civil rights"(<https://www.yahoo.com/news/martin-lutherking-jr---8-peaceful-protests-that-bolstered-civil-rights.html>)Retrieved 2018-10-16.
125. "The Environmental Justice Movement"(<https://www.nrdc.org/stories/environmentaljustice-movement>) *NRDC*. Retrieved 2018-10-16.
126. White-Newsome, Jalonny (2016-07-02). "A Policy Approach Toward Climate Justice". *The Black Scholar*. **46** (3): 12–26. doi:10.1080/00064246.2016.1188353(<https://doi.org/10.1080/00064246.2016.1188353>)ISSN 0006-4246 (<https://www.worldcat.org/issn/0006-4246>)
127. "Cities in the new millennium: Environmental justice, the spatialization of race, and combating anti-urbanism"(<https://rdcu.be/bb11L>) *rdcu.be*. Retrieved 2018-11-26.
128. "Environmental racism: time to tackle social injustice"*The Lancet Planetary Health* **2** (11): e462. 2018. doi:10.1016/S2542-5196(18)30219-5([https://doi.org/10.1016/S2542-5196\(18\)30219-5](https://doi.org/10.1016/S2542-5196(18)30219-5))PMID 30396431 (<https://www.ncbi.nlm.nih.gov/pubmed/30396431>).
129. Bullard, Robert. "Confronting Environmental Racism in the Twenty-First Century" (<https://web.archive.org/web/20120426041754/http://www.worlddialogue.org/content.php?id=179>) Global Dialogue. Archived from the original (<http://www.worlddialogue.org/content.php?id=179>) on April 26, 2012 Retrieved November 19, 2011.
130. Juan De Lara (2018) "This Port Is Killing People" (<https://www.tandfonline.com/doi/full/10.1080/24694452.2017.1393328>): Sustainability without Justice in the Neo-Keynesian Green City *Annals of the American Association of Geographers*, 108:2, 538-548, DOI: 10.1080/24694452.2017.1393328
131. De Lara 2017, p. 540.
132. De Lara 2017, p. 540.

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- [Environmental Justice and Environmental Racism](#)
- [\[1\] Marathon for Justice, 2016 - Film on Environmental Racism](#)

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