

LIVING ON THE FRONTLINE OF ENVIRONMENTAL ASSAULT: LESSONS FROM THE UNITED STATES MOST VULNERABLE COMMUNITIES

VIVENDO NA LINHA DE FRENTE DA LUTA AMBIENTAL: LIÇÕES DAS COMUNIDADES MAIS VULNERÁVEIS DOS ESTADOS UNIDOS

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ABSTRACT

This paper presents the historical foundations and social context of the environmental justice movement in the United States. It provides a critique of government policies and industry practices that endanger the health and safety of African Americans and other minority groups. It examines the role of grassroots groups, community based organizations, and black institutions in dismantling the legacy of environmental racism, exploring some emblematic cases such as the post-Katrina and the BP oil spill in 2010. The paper reveals that environmental injustice remains a major barrier that impede millions of people of color from achieving healthy, livable, and sustainable communities.

Keywords: Environmental Justice. United States. Vulnerable communities.

RESUMO

Este artigo apresenta as bases históricas e o contexto social do movimento por justiça ambiental nos Estados Unidos. Fornece uma crítica das políticas públicas e das práticas industriais que põem em perigo a saúde e a segurança das pessoas negras e de minorias etnicorraciais. Examina o papel dos grupos de base, das organizações comunitárias e do movimento negro no desmantelamento do racismo ambiental, explorando alguns casos emblemáticos, como a situação pós-furacão Katrina e o derramamento de óleo da British Petroleum (BP), em 2010. O artigo revela que as injustiças ambientais continuam sendo uma barreira que impede milhões de pessoas negras e de minorias etnicorraciais de viver em comunidades saudáveis, habitáveis e sustentáveis.

Palavras-chave: Justiça ambiental. Estados Unidos. Comunidades vulneráveis.

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Hardly a day passes without the media discovering some community or neighborhood fighting a landfill, incinerator, chemical plant, or some other polluting industry. This was not always the case. This chapter attempts to lay the historical foundations and social context of the environmental justice movement in the United States. It provides a critique and analysis of government policies and industry practices that endanger the health and safety of African Americans in their neighborhoods, workplace, and playgrounds. Our discussion also examines the role of grassroots groups, community based organizations, and black institutions in dismantling the legacy of environmental racism.

Historical Backdrop

Just three decades ago, the concept of environmental justice had not registered on the radar screens of environmental, civil rights, or social justice groups (Bullard, 1994a). Nevertheless, it should not be forgotten that Dr. Martin Luther King, Jr. went to Memphis in 1968 on an environmental and economic justice mission for the striking black garbage workers. The strikers were demanding equal pay and better work condition. Of course, Dr. King was assassinated before he could complete his mission.

Another landmark garbage dispute took place a decade later in Houston, when African American homeowners began a bitter fight to keep a sanitary landfill out of their suburban middle-income neighborhood (Bullard, 1983). Residents formed the Northeast Community Action Group or NECAG. NECAG and their attorney, Linda McKeever Bullard, filed a class action lawsuit to block the facility from being built. The 1979 lawsuit, *Bean v. Southwestern Waste Management, Inc.*, was the first of its kind to challenge the siting of a waste facility under civil rights law. The landmark Houston case occurred three years before the environmental justice movement was catapulted into the national limelight in the rural and mostly African American Warren County, North Carolina.

The environmental justice movement has come a long ways since its humble beginning in Warren County, North Carolina where a PCB landfill ignited protests and over 500 arrests. The Warren County protests provided the impetus for a U.S. General Accounting Office (1983) study, *Siting of Hazardous Waste Landfills and Their Correlation with Racial and Economic Status of Surrounding Communities*. That study revealed that three out of four of the off-site, commercial hazardous waste landfills in Region 4 (which include Alabama, Florida, Georgia, Kentucky,

Mississippi, North Carolina, South Carolina, and Tennessee) happen to be located in predominantly African-American communities, although African-Americans made up only 20 percent of the region's population. More important, the protesters put "environmental racism" on the map.

The protests also led the Commission for Racial Justice (1987) to produce *Toxic Waste and Race*, the first national study to correlate waste facility sites and demographic characteristics. Race was found to be the most potent variable in predicting where these facilities were located--more powerful than poverty, land values, and home ownership. The *Toxic Waste and Race at Twenty 1987-2007* report concludes that significant racial and socioeconomic disparities persist in the distribution of the nation's commercial hazardous waste facilities. The current assessment uses newer methods that better match where people and hazardous waste facilities are located. In fact, people of color are found to be more concentrated around hazardous waste facilities than previously shown (Bullard et al. 2007; Bullard 2007a, 2007b).

In 1990, *Dumping in Dixie: Race, Class, and Environmental Quality* chronicled the convergence of two social movements--social justice and environmental movements--into the environmental justice movement (Bullard, 1994b). This book highlighted African-Americans environmental activism in the South, the same region that gave birth to the modern civil rights movement. What started out as local and often isolated community-based struggles against toxics and facility siting blossomed into a multi-issue, multi-ethnic, and multi-regional movement.

The 1991 First National People of Color Environmental Leadership Summit was the most important single event in the environmental justice movement's history. The Summit broadened the movement beyond its somewhat narrow anti-toxics focus to include issues of public health, worker safety, land use, transportation, housing, resource allocation, and community empowerment (Lee, 1992a). The meeting also demonstrated that it is possible to build a multi-racial grassroots movement around environmental and economic justice (Alston, 1992).

Held in Washington, DC, the four-day Summit was attended by over 650 grassroots and national leaders from around the world. Delegates came from all fifty states including Alaska and Hawaii, Puerto Rico, Chile, Mexico, and as far away as the Marshall Islands. People attended the Summit to share their action strategies, redefine the environmental movement, and develop common plans for addressing environmental problems affecting people of color in the United States and around the world. On September 27, 1991, Summit delegates adopted 17 "Principles of Environmental Justice." These principles were developed as a guide for organizing,

networking, and relating to government nongovernmental organizations (NGOs). By June 1992, Spanish and Portuguese translations of the Principles were being used and circulated by NGOs and environmental justice groups at the Earth Summit in Rio de Janeiro.

The publication of the *People of Color Environmental Groups Directory* in 1992, 1994, and 2000 further illustrates that environmental justice organizations are found from in the United States from coast to coast, in District of Columbia, in Puerto Rico, in Mexico, and in Canada. Groups have come to embrace a wide range of issues, including public health, children's health, pollution prevention, facility siting, housing, brownfields, community reinvestment, air pollution, urban sprawl, land use, worker safety, public participation, transportation discrimination, smart growth, and regional equity (Bullard 2000a).

The Environmental Justice Paradigm

Despite significant improvements in environmental protection over the past several decades, millions of Americans continue to live in unsafe and unhealthy physical environments. As we stated earlier, many economically impoverished communities and their inhabitants are exposed to greater health hazards in their homes, on the jobs, and in their neighborhoods when compared to their more affluent counterparts (Bullard 1994a, 1994b; U.S. EPA 1992; Bryant and Mohai 1992; Bryant 1995; Calloway and Decker 1997; Collin and Collin, 1998).

From New York to Los Angeles, grassroots community resistance has emerged in response to practices, policies, and conditions that residents have judged to be unjust, unfair, and illegal. Some of these conditions include: (1) unequal enforcement of environmental, civil rights, and public health laws, (2) differential exposure of some populations to harmful chemicals, pesticides, and other toxins in the home, school, neighborhood, and workplace, (3) faulty assumptions in calculating, assessing, and managing risks, (4) discriminatory zoning and land-use practices, and (5) exclusionary practices that limit some individuals and groups from participation in decision making (Lee 1992b; Bullard 1993a 1993b).

Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including racial, ethnic, or socio-economic groups should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal

programs and policies (U.S. EPA, 1998).

During its 43-year history, the U.S. Environmental Protection Agency (EPA) has not always recognized that many government and industry practices (whether intended or unintended) have adverse impact on poor people and people of color. Growing grassroots community resistance emerged in response to practices, policies, and conditions that residents judged to be unjust, unfair, and illegal. The EPA is mandated to enforce the nation's environmental laws and regulations equally across the board. It is required to protect all Americans---not just individuals or groups who can afford lawyers, lobbyists, and experts. Environmental protection is a right, not a privilege reserved for a few who can "vote with their feet" and escape or fend off environmental stressors.

The current environmental protection apparatus manages, regulates, and distributes risks (Bullard, 1996). The dominant environmental protection paradigm institutionalizes unequal enforcement, trades human health for profit, places the burden of proof on the "victims" and not the polluting industry, legitimates human exposure to harmful chemicals, pesticides, and hazardous substances, promotes "risky" technologies, exploits the vulnerability of economically and politically disenfranchised communities, subsidizes ecological destruction, creates an industry around risk assessment and risk management, delays cleanup actions, and fails to develop pollution prevention as the overarching and dominant strategy (Bullard, 1993a, 1993b, 1993c).

A growing body of evidence reveals that people of color and low-income persons have borne greater environmental and health risks than the society at large in their neighborhoods, workplace, and playgrounds (Johnson et al. 1992; National Institute for Environmental Health Sciences, 1995). On the other hand, the environmental justice paradigm embraces a holistic approach to formulating environmental health policies and regulations, developing risk reduction strategies for multiple, cumulative and synergistic risks, ensuring public health, enhancing of public participation in environmental decision-making, building infrastructure for achieving environmental justice and sustainable communities, ensuring interagency cooperation and coordination, developing innovative public/private partnerships and collaboratives, enhancing community-based pollution prevention strategies, ensuring community-based sustainable economic development, and developing geographically-oriented community-wide programming.

The question of environmental justice is not anchored in a debate about whether or not decision makers should tinker with risk assessment and risk management. The environmental justice framework (EJF) rests on developing tools and strategies to eliminate unfair, unjust, and inequitable conditions and decisions (Bullard, 1996). The framework also attempts to uncover

the underlying assumptions that may contribute to and produce differential exposure and unequal protection. It brings to the surface the ethical and political questions of "who gets what, when, why, and how much."

In response to growing public concern and mounting scientific evidence, President Clinton on February 11, 1994 (the second day of the national health symposium) issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." This Order attempted to address environmental injustice within existing federal laws and regulations. Executive Order 12898 reinforces the 35-year old Civil Rights Act of 1964, Title VI, which prohibits discriminatory practices in programs receiving federal funds.

The Order also focused the spotlight back on the National Environmental Policy Act (NEPA), a twenty-five year old law that set policy goals for the protection, maintenance, and enhancement of the environment. NEPA's goal is to ensure for all Americans a safe, healthful, productive, and aesthetically and culturally pleasing environment. NEPA requires federal agencies to prepare a detailed statement on the environmental effects of proposed federal actions that significantly affect the quality of human health (Council on Environmental Quality, 1997).

The Executive Order called for improved methodologies for assessing and mitigating impacts, health effect from multiple and cumulative exposure, collection of data on low-income and minority populations who may be disproportionately at risk, and impacts on subsistence fishers and wildlife consumers. It also encourages participation of the impacted populations in the various phases of assessing impacts--including scoping, data gathering, alternatives, analysis, mitigation, and monitoring.

The Executive Order focused on "subsistence" fishers and wildlife consumers. Everybody does not buy his or her fish at the supermarket. There are many people in the U.S. who are subsistence fishers, who fish for protein, who basically subsidize their budgets, and their diets, by fishing from rivers, streams, and lakes that happen to be polluted. These subpopulations may be under protected when basic assumptions are made using the dominant risk paradigm.

Polluting Facilities and Race of Nearby Residents

The 1979 Houston solid waste study was one of the first environmental was one of the earliest studies that link race with solid waste facility siting (Bullard 1983). More than 80 percent

of the wastes disposed in Houston from the 1920s to the late 1970s went to landfills and incinerators located in mostly black neighborhoods. However, during five-decade period, black made up only about 25 percent of the city's overall population. Clearly, the study showed that Black Houston was receiving more than its fair share of city garbage.

In 1990, the *Dumping in Dixie* book documented racial dynamics involved in the location of municipal lands, hazardous waste sites, incinerators, lead smelters, refineries and chemical plants (Bullard 2000b, 1990). To be poor, working-class, or a person of color in the United States often means bearing a disproportionate share of the country's environmental problems. Environmental racism was codified by "Jim Crow" laws and reinforced by policies and practices that dumped locally unwanted land uses or LULUs on black communities. Starting with the premise that all Americans have a basic right to live in a healthy environment, *Dumping in Dixie* chronicled the efforts of five African American communities, empowered by the civil rights movement, to link environmentalism with issues of social justice.

People of color and poor people live with more pollution than the rest of the nation (Pace 2005). African Americans are 79 percent more likely than whites to live in neighborhoods where industrial pollution is suspected of posing the greatest health danger. African Americans in **19** states are more than twice as likely as whites to live in neighborhoods with high pollution and a similar pattern was discovered for Hispanics in 12 states and Asians in 7 states.

More than 68 percent of African Americans live within 30 miles of a coal-fired power plant—the distance within which the maximum effects of the smokestack plume are expected to occur. In comparison, 56 percent of whites and 39 percent of Latinos live in such proximity to a coal-fired power plant (Clear the Air et al. 2002). Focusing on PM_{2.5} and ozone, researchers have found non-Hispanic blacks are consistently overrepresented in communities with the poorest air quality (Miranda 2011). Low-income and minority communities in Michigan tend to experience higher ambient pollution levels. Air pollution from industrial sources near Michigan public schools jeopardizes children's health and academic success, according to a study from University of Michigan researchers (Mohai et al. 2011). The researchers found that schools located in areas with the state's highest industrial air pollution levels had the lowest attendance rates—an indicator of poor health—as well as the highest proportions of students who failed to meet state educational testing standards. Minority students appear to bear the greatest burden. While 44.4 percent of all white students in the state attend schools located in the top 10 percent of the most polluted locations in the state, 81.5 percent of all African American schoolchildren and 62.1 percent of all Hispanic students attend schools in the most polluted zones.

A 2012 study of found low-income and communities of color in the 14-county Atlanta region were more likely to live near and be disproportionately impacted by pollution than others (GreenLaw 2012). The “environmental justice hotspots” with the most sources of pollution were in areas where there were either extraordinarily high minority densities or areas where people don’t speak English as a first language (GreenLaw 2012). Examining toxic release inventory (TRI) facilities in the San Francisco Bay Area in California, researchers found that two-thirds of those living within a mile of such facilities were people of color, while two-thirds of those living more than 2.5 miles away were white (Pastor et al. 2001). For Latinos and Asians, those more likely to be near releases were “linguistically isolated,” a fact with important implications for community outreach and participation.

In tracking pollution from individual companies to specific communities, the most polluted places tend to have significantly higher-than-average percentages of people of color. Of the top 10 companies on the “Toxic 100” list, people of color bear more than half of the human health impacts from the companies’ toxic air releases (Ash et. al., 2009). Much of the polluting industry facility follows racially segregated housing pattern. Nationally, black, white, and Hispanic households with similar incomes live in neighborhoods of dissimilar environmental quality (Downey & Hawkins. 2008). African Americans and single mothers with young children live in the most polluted neighborhoods in the United States. Low-income, predominantly black neighborhoods and households suffer a much higher pollution burden than whites, Hispanics and Asians. This is not explained by poverty. As a matter of fact, black households with incomes of \$50,000 to \$60,000 live in neighborhoods that are, on average, more polluted than the average neighborhood of white households with incomes less than \$10,000 (Downey & Hawkins, 2008).

Race is still a potent factor in sorting neighborhood pollution and environmental hazards. The 2007 Toxic Wastes and Race at Twenty report found race to be the most important variable in explaining the location of the nation’s 413 commercial hazardous waste facilities (Bullard et al. 2007). People of color made up the majority (56%) of those living in neighborhoods within two miles of commercial hazardous waste facilities, nearly double the percentage in areas beyond two miles (30%); people of color made up a much larger (over two-thirds) majority (69%) in neighborhoods with clustered facilities; people of color in 2007 were more concentrated in areas with commercial hazardous sites than in 1987.

Deadly dumping grounds

Clearly, African American and other people of color communities in the United States continue to be disproportionately and adversely impacted by environmental toxins. Black residents in communities located on the fence line with polluting industries comprise a special needs population that deserves special attention. Toxic chemical assaults are not new for many Americans who are forced to live adjacent to and often on the fence line with chemical industries that spew their poisons into the air, water, and ground (Bullard 2005a). When (not if) chemical accidents occur, government and industry officials often instruct the fence-line community residents to "shelter in place." In reality, locked doors and closed windows do not block the chemical assault on the nearby communities, nor do they remove the cause of the anxiety and fear of the unknown health problems that may not show up for decades.

Cleaning Up Toxic Racism – But No Reparation for Victims

In December 2003, after waiting more than two decades, an environmental justice victory finally came to the residents of predominately black Warren County, North Carolina. Since 1982, county residents lived with the legacy of a 142-acre toxic waste dump. Detoxification work began on the dump in June 2001 and the last clean-up work ended the latter part of December 2003. State and federal sources spent \$18 million to detoxify or neutralize contaminated soil stored at the Warren County PCB landfill (Rawlins 2003). A private contractor hired by the state dug up and burned 81,500 tons of oil-laced soil in a kiln that reached more than 800-degrees Fahrenheit to remove the PCBs (polychlorinated biphenyls). The soil was put back in a football-size pit, re-covered to form a mound, graded, and seeded with grass.

Local Warren County leaders and their allies across the state deserve a gold medal for not giving up the long fight and pressuring government officials to keep their promise and clean up the mess they created. This was no small win given state deficits, budget cuts, and past broken promises. Residents and officials now must grapple with what to do with the site. The controversial PCB landfill is owned by the North Carolina Department of Environment and Natural Resources (DENR) and is located about 60 miles northeast of Raleigh off North Carolina SR 1604 and U.S. Highway 401. The sign at the entrance to the Warren County PCB landfill reads, "PCB Landfill -- No Trespassing." Clearly, the phrase "Justice Delayed is Justice Denied" might be more appropriate for a new sign at the entrance to the site. The toxic-waste dump was forced on the tiny Afton community—more than 84 percent of the community was black in 1982—helping trigger the national EJM. While the 'mid-night dumpers' were fined and jailed, the innocent Afton community was handed a 20-year sentence of living in a toxic-waste

prison.

The PCB landfill later became the most recognized symbol in the county. Despite the stigma, Warren County also became a symbol of the EJM. Warren County residents pleaded for a more permanent solution, rather than a cheap “quick-fix” that would eventually end up with the PCBs leaking into the groundwater and wells. Their voices fell on deaf ears. State and federal officials chose to build a landfill, the cheap way out. By 1993, the landfill was failing, and for a decade community leaders pressed the state to decontaminate the site.

Residents of Warren County were searching for guarantees the government was not creating a future “superfund” site that would threaten nearby residents. North Carolina state officials and federal EPA officials could give no guarantees since there is no such thing as a 100-percent safe hazardous waste landfill, one that will not eventually leak. It all boiled down to trust. Can communities really trust government (state and federal) to do the right thing? Recent history and hundreds of books are filled with case studies of government deception and “white-washing” real threats to public health. Even after detoxification, some Warren County residents still question the completeness of the clean-up, especially contamination that may have migrated beyond the 3-acre landfill site—into the 137-acre buffer zone that surrounds the landfill and the nearby creek and outlet basin. PCBs are persistent, bioaccumulative, and toxic pollutants (PBTs). That is, they are highly toxic, long-lasting substances that can build up in the food chain to levels that are harmful to human and ecosystem health. PCBs are not something most Americans would want as a next-door neighbor. PCBs are probable human carcinogens. They also cause developmental effects such as low birth weight and they disrupt hormone function.

Warren County is located in Eastern North Carolina. The 29 counties located “Down East” are noticeably different from the rest of North Carolina (Ricketts & Pope, 2002). According to 2000 census, whites comprised 62 percent of the population in Eastern North Carolina and 72 percent statewide. Blacks are concentrated in the northeastern and the central parts of the region. Warren County is one of six counties in the region where blacks comprised a majority of the population in 2000: Bertie County (62.3%), Hertford (59.6%), Northhampton (59.4%), Edgecombe (57.5%), Warren (54.5%), and Halifax (52.6%). Eastern North Carolina is also significantly poorer than the rest of the state (McLaughlin, ND). In 1999, per capita income in North Carolina was \$26,463, but in the eastern region it was only \$18,550 (Ricketts & Pope, 2002, 21).

Warren County is vulnerable to a “quadruple whammy” of being mostly black, poor, rural, and politically powerless. The county had a population of 16,232 in 1980. Blacks

comprised 63.7 percent of the county population and 24.2 percent of the state population in 1980. The county continues to be economically worse off than the state as a whole on all major social indicators. Per capita income for Warren County residents was \$6,984 in 1982 compared with \$9,283 for the state. Warren County residents earned about 75 percent of the state per capita income. Infrastructure development in this part of North Carolina diverted traffic and economic development away from Warren County. Generally, development often follows along major highways. Economic development bypassed much of the county. Over 19.4 percent of Warren County residents compared with 12.3 percent of the state residents lived below the poverty level in 1999. Warren County has failed to attract new business.

It is important that the state finally detoxified the Warren County PCB landfill—a problem it created for local residents. This is a major victory for local residents and the EJM. However, it is also important that the surrounding land area and local community be made environmentally whole. Detoxifying the landfill does not bring the community back to its pre-1982 PCB-free environmental condition. Soil still containing small PCBs levels is buried at least 15 feet below the surface in the dump. Government officials claim the site is safe and suitable for reuse. However none of them live next door to the dump. While there remain some questions about suitable reuse of the site, there is no evidence that the land has been brought back to its pre-1982 condition—where homes with deep basements could have been built and occupied and backyard vegetables gardens grown with little worry about toxic contamination or safety.

The placement of the PCB landfill in Afton is a textbook case of environmental racism. Around the world, environmental racism is defined as a human rights violation. Strong and persuasive arguments have been made for reparations as a remedy for serious human rights abuse. Under traditional human rights law and policy, we expect governments that practice or tolerate racial discrimination to acknowledge and end this human rights violation and compensate the victims. Environmental remediation is not reparations. No reparations have been paid for the two decades of economic loss, psychological damage, and mental anguish suffered by the Warren County residents.

Justice will not be complete until the 20,000 Warren County residents receive a public apology and some form of financial reparations from the perpetrators of ER against the local citizens. How much reparations should be paid is problematic since it is difficult for anyone to put a price tag on peace of mind. At minimum, Warren County residents should be paid reparations equal to the cost of detoxifying the landfill site or \$18 million. Another reparations formula might include payment of a minimum of \$1 million a year for every year the mostly black

Afton community hosted the PCB-landfill or \$21 million.

It probably would not be difficult for a poor mostly black county that lacks a hospital to spend \$18-\$21 million. The nearest hospitals from Afton are located in neighboring Vance County (15 miles away) and across the state line in South Hill, Virginia (33 miles away). Some people may think the idea of paying reparations or monetary damages a bit farfetched. However, until the impacted community is made whole, the PCB-landfill detoxification victory won by the tenacity and perseverance of local Warren County residents will remain incomplete.

When it comes to enforcing the rights of poor people and people of color in the U.S., government officials often look the other way. Too often they must be prodded to enforce environmental and civil rights laws and regulations without regard to race, color, national origin, and socioeconomic (class) background. Laws, regulations, and Executive Orders are only as good as their enforcement. Unequal enforcement has left a gaping environmental protection hole in many poor and people of color communities. Waiting for government to act is a recipe for disaster.

Race, Place and Environmental Justice in Post-Katrina New Orleans

On August 29, 2005, Hurricane Katrina laid waste to New Orleans, an American city built mostly below sea level and whose coastal wetlands, which normally serve as a natural buffer against storm surge, had been destroyed by developers (Pastor et al.2001); disasters in U.S. history—a disaster that is still ongoing (Dyson 2006; Heerden and Bryan 2006; Horne 2006; Mann 2006; Brunsmas et al. 2007). A September 2005 *Business Week* commentary described the handling of the untold tons of “lethal goop” as the “mother of all toxic cleanups” (*Business Week* 2005). However, the billion-dollar question facing New Orleans is which neighborhoods will get cleaned up, which ones will be left contaminated and which ones will be targeted as new sites to dump storm debris and waste from flooded homes.

Cleaning Up Toxic Neighborhoods

Flooding in the New Orleans metropolitan area largely resulted from breached levees and flood walls (Gabe et al. 2005). A May 2006 report from the Russell Sage Foundation, *In the Wake of the Storm: Environment, Disaster, and Race after Katrina*, found these same groups often experience a “second disaster” after the initial storm (Bullard 2005c). Quite often the scale of a disaster’s impact, as in the case of Hurricane Katrina, has more to do with the political economy of the country, region and state than with the hurricane’s category strength (Jackson 2005; Hartman and

Squires 2007).

Quite often measures to prevent or contain the effects of disaster vulnerability are not equally provided to all (Bullard 2005b). Typically, flood-control investments provide location-specific benefits, with the greatest benefits going to populations who live or own assets in the protected area. Thus, by virtue of where people live, work or own property, they may be excluded from the benefits of government-funded flood-control investments (Boyce 2000). Hurricane Katrina left debris across a 90,000-square-foot disaster area in Louisiana, Mississippi and Alabama, compared to a 16-acre tract in New York on September 11, 2001 (Luther 2006). According to the Congressional Research Service, debris from Katrina could well top 100 million cubic yards compared to the 8.8 million cubic yards of disaster debris generated after the 9/11 terrorist attacks on New York City. Ten months after the storm, FEMA had spent \$3.6 billion to remove 98.6 million cubic yards of debris from Katrina (Jordan 2006). This is enough trash to pile two miles high across five football fields. Still, an estimated 20 million cubic yards littered New Orleans and Mississippi waterways—with about 96 percent or 17.8 million cubic yards of remaining wreckage in Orleans, St. Bernard, St. Tammany, Washington and Plaquemine parishes. Louisiana parishes hauled away 25 times more debris than was collected after the 9/11 terrorist attack in 2001 (Shields 2006).

In addition to wood debris, EPA and LDEQ officials estimated that 140,000 to 160,000 homes in Louisiana may need to be demolished and disposed of (U.S. EPA and LDEQ 2005). More than 110,000 of New Orleans' 180,000 homes were flooded, and half sat for days or weeks in more than six feet of water (Nossiter 2005). Government officials estimate that as many as 30,000 to 50,000 homes citywide may need to be demolished. An additional 350,000 automobiles had to be drained of oil and gasoline and then recycled; 60,000 boats needed to be destroyed; and 300,000 underground fuel tanks and 42,000 tons of hazardous waste had to be cleaned up and properly disposed at licensed facilities (Varney and Moller 2005). Government officials peg the numbers of cars lost in New Orleans alone at 145,000.

In March 2006, seven months after the storm slammed ashore, organizers of “A Safe Way Back Home” initiative, the Deep South Center for Environmental Justice at Dillard University (DSCEJ) and the United Steel Workers (USW) undertook a proactive pilot neighborhood clean-up project—the first of its kind in New Orleans (Deep South Center for Environmental Justice 2006). The clean-up project, located in the 8100 block of Aberdeen Road in New Orleans East, removed six inches of tainted soil from the front and back yards, replacing the soil with new sod and disposing the contaminated dirt in a safe manner. Residents who

choose to remove the top soil from their yards—which contains sediments left by flooding—find themselves in a “Catch-22” situation with the LDEQ and EPA insisting the soil in their yards is not contaminated and the local landfill operators refusing to dispose of the soil because they expect it is contaminated. This bottleneck of what to do with the topsoil was unresolved a year and a half after the devastating flood.

Although government officials insist the dirt in residents’ yards is safe, Church Hill Downs Inc., the owners of New Orleans’ Fair Grounds, felt it was not safe for its thoroughbred horses. The Fair Grounds is the nation’s third-oldest track. The owners hauled off soil tainted by Hurricane Katrina’s floodwaters and rebuilt a grandstand roof ripped off by the storm’s wind (Martell 2006). The Fair Grounds opened on Thanksgiving Day 2006. Certainly, if tainted soil is not safe for horses, surely it is not safe for people—especially children who play and dig in the dirt.

The “A Safe Way Back Home” demonstration project serves as a catalyst for a series of activities that will attempt to reclaim the New Orleans East community following the devastation caused by hurricane Katrina. It is the government's responsibility to provide the resources required to address areas of environmental concern and to ensure the workforce is protected. However, residents are not waiting for the government to ride in on a white horse to rescue them and clean up their neighborhoods (News from USW 2006). The DSCEJ/USW coalition received dozens of requests and inquiries from New Orleans East homeowners associations to help clean up their neighborhoods block by block. State and federal officials labeled the voluntary clean-up efforts as “scaremongering” (Simmons 2006).

EPA and LDEQ officials said that they tested soil samples from the neighborhood in December and that there was no immediate cause for concern. According to Tom Harris, administrator of LDEQ’s environmental technology division, and state toxicologist, the government originally sampled 800 locations in New Orleans and found cause for concern in only 46 samples. Generally, the soil in New Orleans is consistent with “what we saw before Katrina,” says Harris. He called the “A Safe Way Back Home” program “completely unnecessary” (Williams 2006).

A week after the voluntary cleanup project began, an LDEQ staffer ate a spoonful of dirt scraped from the Aberdeen Road pilot project. The dirt-eating publicity stunt was clearly an attempt to disparage the proactive neighborhood clean-up initiative. LDEQ officials later apologized. Despite barriers and red tape, Katrina evacuees are moving back into New Orleans’ damaged homes or setting up travel trailers in their yards. One of the main questions returning

residents have is: Is this place safe? They're getting mixed signals from government agencies. In December 2005, the LDEQ announced that there was no unacceptable long-term health risk directly attributable to environmental contamination resulting from the storm. Two months later, in February, the Natural Resources Defense Council (NRDC) test results came out with different conclusions (Solomon and Rotkin-Ellman 2006). NRDC's analyses of soil and air quality after Hurricane Katrina revealed dangerously high levels of diesel fuel, lead and other contaminants in Gentilly, Bywater, Orleans Parish and other New Orleans neighborhoods.

Although many government scientists insist the soil is safe, an April 2006 multi-agency task force press release distributed by the EPA raised some questions (U.S.EPA 2006). Though it claimed that the levels of lead and other contaminants in New Orleans soil was "similar" to soil contaminant levels in other cities, it also cautioned residents to "keep children from playing in bare dirt. Cover bare dirt with grass, bushes or 4-6 inches of lead-free wood chips, mulch, soil or sand." Instead of cleaning up the mess that existed before and after the storm, government officials are allowing dirty neighborhoods to stay dirty forever. In August 2006, nearly a year after Katrina made landfall, the federal EPA gave New Orleans and surrounding communities a clean bill of health, while pledging to monitor a handful of toxic hot spots (Brown 2006). EPA and LDEQ officials concluded that Katrina did not cause any appreciable contamination that was not already there. Although EPA tests confirmed widespread lead in the soil—a pre-storm problem in 40 percent of New Orleans – EPA dismissed residents' calls to address this problem as outside the agency's mission.

Three years after Katrina, nearly one third of New Orleans' residents had not made it back home (Liu and Plyer 2008). The road home for many Katrina survivors has been a bumpy one, largely due to slow government actions to distribute the billions in federal aid to residents to rebuild. The Louisiana Road Home Program for Homeowners is distributing \$10.5 billion in federal funds plus \$1 billion in state funds to Louisiana homeowners to about 160,000 applicants whose homes were devastated in 2005 by Hurricanes Katrina or Rita or the subsequent flooding. Eighteen months after the Louisiana Road Home Program began, it had closed 90,000 grants, but some of those are still waiting for disputed award money and another 70,000 still have not gotten any money at all (Hammer 2008). ICF International, the program's lead contractor, has been widely criticized for the slow pace of getting money to displaced homeowners.

Health Threats from Toxic FEMA Trailers

Right after Katrina, FEMA purchased about 102,000 travel trailers for \$2.6 billion or roughly \$15,000 each (Spake 2007). Surprisingly, there were reports of residents becoming ill in these trailers due to the release of potentially dangerous levels of formaldehyde. In fact, formaldehyde is the industrial chemical (i.e. glues, plastics, building materials, composite wood, plywood panels and particle board) that was used to manufacture the travel trailers (Babington 2007). In Mississippi, FEMA received 46 complaints of individuals who indicated that they had symptoms of formaldehyde exposure which include: eye, nose and throat irritation, nausea, skin rashes, sinus infections, depression, mucus membranes, asthma attacks, headaches, insomnia, intestinal problems, memory-impairment and breathing difficulties (Spake 2007).

Even though FEMA received numerous complaints about toxic trailers, the agency only tested one occupied trailer to determine the levels of formaldehyde in it (U.S. House of Representatives Committee on Oversight and Government Reform 2007). The test confirmed that the levels of formaldehyde were extraordinarily high and presented an immediate health risk to the displaced occupants. Unfortunately, FEMA did not test any more occupied trailers and released a public statement discounting any risk associated with formaldehyde exposure.

FEMA deliberately neglected to investigate any reports of high levels of formaldehyde in trailers so as to bolster FEMA's litigation position just in case individuals affected by their negligence decided to sue them (Babington 2007). More than five hundred hurricane survivors and evacuees in Louisiana are pursuing legal action against the trailer manufacturers for being exposed to the toxic chemical formaldehyde. In July 2007, FEMA stop buying and selling disaster relief trailers because of the formaldehyde contamination. In August 2007, FEMA began moving families out of the toxic trailers and finding them new rental housing. Testing of FEMA travel trailers for formaldehyde and other hazards began in September 2007 (Treadway 2007). The Centers for Disease Control and Prevention was assigned the lead agency in developing parameters for testing the travel trailers.

In February of 2007, ATSDR released a health consultation entitle "Formaldehyde Sampling at FEMA Temporary Housing Units" in which 96 unoccupied trailers were tested for formaldehyde and other VOCs (ATSDR 2007a). The study found that non-ventilated trailers had readings higher than 0.3 ppm (at the time ATSDR stated that 0.3 ppm is the level of concern for sensitive individuals) and levels dropping below this level for trailers that were adequately ventilated. According to the report, the air was safe to breathe and the contamination would not reach a "level of concern" as long as they kept the windows open (ATSDR 2007a).

In October of 2007, ATSDR issued that replaced the previous health consultation

released in February 2007. The previous health consultation dated February 1, 2007, contained insufficient discussion of the health implications of formaldehyde exposure, and some language may have been unclear, potentially leading readers to draw incorrect or inappropriate conclusions. Additionally, analyses of formaldehyde levels by trailer type and by daily temperature were not conducted (ATSDR 2007b). The follow-up report also used the same 0.3 ppm standard used on the first study, but according to proPublica, an investigative journalism organization based in New York City, ATSDR should have utilized a 0.03 ppm standard. The larger standard is only used for one time exposure. For longer term, 8-24 hours, the researchers should have applied the lower standard. The use of the wrong standard caused resident's exposure levels 10 times higher than acceptable (Sapien 2008). At levels so high, formaldehyde can cause respiratory problems and irritation within two hours of exposure. In October of 2008, the U.S. House of Representatives' Committee on Science and Technology published a report detailing their investigation in the trailer issue. The report states:

ATSDR's reaction was marred by scientific flaws, ineffective leadership, a sluggish response to inform trailer residents of the potential risks they faced, and a lack of urgency to actually remove them from harm's way. Most disturbingly, there was a concerted and continuing effort by the agency's leadership to both mask their own involvement in the formaldehyde study, and to push the blame for their fumbling of this critical public health issue down the line to others.

The health consultation itself, conducted at the request of FEMA's Office of General Counsel because of expected litigation concerns, was scientifically flawed and omitted critical health information (U.S. House of Representatives 2008).

The Congressional report also states that ATSDR, failed to serve the public by not using the best science, by not taking responsive public health actions, and by not providing trusted health information to prevent harmful exposures and disease related to toxic substances (U.S. House of Representatives 2008).

A December 2008 report by The Children's Health Fund (CHF) reviewed the medical charts of 261 children living in a FEMA village in Baton Rouge and discovered shocking health outcomes. The report found: 41% of children younger than 4 had iron-deficiency anemia, which causes fatigue, attention-deficit disorders, and skin problems; 55% of these displaced children exhibited learning or behavior problems; 42% developed allergic rhinitis, also called hay fever and upper respiratory infection; 24% developed a cluster of ailments affecting the skin and upper respiratory tract, including allergies.

The report also found that for these kids, the health level has actually declined since the storm and they are worse off today (Children's Health Fund 2008). More than 10,800 toxic

trailers were sold by the General Service Administration from July 2006 to July 2007 to the public after Katrina survivors and communities refused them. The trailers, which on average cost \$18,600 each, were sold to anyone for 40 cents on the dollar. After suspending sale of trailers, FEMA offered to buy back the toxic trailers purchased by the public and Katrina evacuees. In January 2008, more than 40,000 FEMA trailers were still being used as emergency shelter along the Gulf Coast, with the vast majority of the trailers located in Louisiana (Kaufman 2008). In December 2008, more than 9,300 families were living in temporary trailers and an additional 1,600 live in hotel rooms throughout the Gulf Coast region (CHF 2008).

BP Oil Spill: Why Race and Place Matter in the Gulf Coast

Tens of thousands of industrial accidents, leaks, and spills occur each year in the United States. Many of the spills go unnoticed. Few accidents grab the headlines and the attention of the nation and the world as happened after the April 20, 2010, explosion of an oilrig owned by British Petroleum (BP) in the Gulf of Mexico off the coast of Louisiana. The oil spill started when the Deepwater Horizon rig, leased by BP from Transocean Ltd., exploded and burned, killing eleven workers.

The BP oil accident was a disaster waiting to happen. Environmental groups for decades have called on the government to pay closer attention to abandoned oil and gas wells <<this was not an abandoned site, was it?>> in the Gulf of Mexico, as federal regulators do not typically inspect or monitor the plugging of leaky offshore wells (U.S. Environmental Protection Agency 2009).

The BP accident created the largest oil disaster in U.S. history—even larger than the 1989 Exxon Valdez spill in Alaska. Efforts to tracking the amount of oil spewing into the Gulf were mired in secrecy and controversy. BP kept changing the numbers, adding to the mounting public mistrust of the oil giant. BP first estimated the spill to be releasing a paltry five thousand barrels (210,000 gallons) of oil per day. Government and independent scientists later confirmed that the well was in fact pouring as much as sixty thousand barrels, or 2.5 million gallons, of oil into the Gulf every day. Documenting the amount of oil released is crucial since the London-based BP PLC is likely to be fined per gallon spilled.

BP also used more than 1.8 million gallons of dispersants on the Gulf's surface and at depths up to five thousand feet deep at the source of the leak —the largest amount ever used on a U.S. oil spill. Dispersants are supposed to neutralize the oil spill's toxic effects by breaking the

oil down and spreading it around. The government and BP lack scientific information on the long-term effects of dispersants. Some Gulf Coast residents, fishermen, environmentalists, and marine biologists fear that dispersants may kill more sea life than the oil. In defiance of an EPA order, BP pumped more than a million gallons of the Corexit dispersant, a neurotoxin pesticide, into the Gulf of Mexico. Corexit was banned as a dispersant in the United Kingdom in 1998.

The oil spill created an environmental nightmare on the Gulf Coast from Florida to Texas, and BP's oil cleanup and containment plan received widespread criticism. According to the National Oceanic and Atmospheric Administration (NOAA), the government closed more than 81,181 square miles of the Gulf, or approximately 33.5 percent of the Gulf's federal waters, to fishing. The spill fouled 120 miles of U.S. coastline, imperiled multi-billion-dollar fishing and tourism industries and killed birds, sea turtles, and dolphins. The full health, environmental, and economic impacts of this catastrophe may not become clear for decades.

While the media spotlight has focused attention on efforts to stop the massive oil leak and clean up the spill, the same level of attention was not given to where the oil-spill cleanup waste would eventually be dumped—even after an Associated Press spot check showed mishandling of waste and shoddy disposal work (Gordon 2009). Before one drop of oil was cleaned up, black people were asking, “Where will the oil-spill waste go after it has been collected from the beaches and skimmed off the water?” The answer: solid-waste landfills. Concern mounted about which communities would be selected as the final resting place for BP's garbage. Because of the size of the massive oil spill, even white communities in the Gulf Coast began asking this same question: “Where is the waste going?” (Bullard 2005b)

Given the sad history of waste disposal in the southern United States, it should be no surprise to anyone that the BP waste disposal plan mirrored past “Dumping in Dixie” patterns and became a core environmental justice concern, especially among low-income communities and communities of people of color along the Gulf Coast—communities whose residents have historically borne more than their fair share of solid-waste landfills and hazardous-waste facilities before and after natural and man-made disasters (Faulkner 2010).

A large segment of the African American community was skeptical of BP, the oil and gas industry, and the government long before the disastrous Gulf oil spill, since black communities too often have been on the receiving end of polluting industries without receiving the benefit of jobs and have been used as a repository for other people's rubbish. It is more than ironic that black and other communities of color get BP's garbage, while mostly white companies rake in millions in BP contracts. It does not take a rocket scientist to figure out that this flow of benefits

is inequitable.

Black communities were getting more than their fair share of BP oil-spill waste, yet they were locked out of cleanup contracts and other opportunities related to addressing this disaster. Using the latest Federal Procurement Data System (FPDS) information (July 9, 2010), the environmental writer Brentin Mock found that “minorities see little green in BP oil spill jobs”(U.S. Environmental Protection Agency 2007b). He discovered that only \$2.2 million of \$53 million in federal contracts, a paltry 4.8 percent, had actually gone to small, disadvantaged businesses. Women-owned businesses had received 4.2 percent of contracts, and, of the 212 vendors with contracts, just 2 were African American, 18 were minority owned, and none were historically black colleges or universities (HBCUs), even though there are three just in New Orleans: Xavier University, Dillard University, and Southern University at New Orleans.

In mid-June 2010, environmental justice and equity concerns were aired at the EPA National Environmental Justice Advisory Council (NEJAC) in New Orleans and on an EPA conference call meeting “attended” by more than 370 callers (Environmental Justice Integrity Project and Earthjustice 2009). EPA administrator Lisa P. Jackson, who was on the call for thirty minutes, emphasized that environmental justice was a priority and indicated that her agency had added staffers to the Joint Information Center to work specifically on environmental justice concerns in the agency's day-to-day operations.

In August 2009, Mathy Stanislaus, EPA assistant administrator for the Office of Solid Waste and Emergency Response (OSWER), posited some key questions and challenges for his office. One question seems especially relevant for the BP spill. Stanislaus asks, “How can we develop better strategies for handling waste or cleaning up contaminated sites?” The answer is simple: make the strategies fair, just, and equitable without regard to race, color, or national origin, or income status.

This has not happened. African American communities along the Gulf Coast still see the “PIBBY” (Place in Blacks' Back Yard) principle operating: a mindset that allows a disproportionate share of black communities to be targeted for BP oil-spill waste disposal. Gulf Coast residents who live on the fence line with landfills are determined not to see a repetition of past mistakes that allowed waste from major industrial accidents or disasters to be dumped on poor and politically powerless African American communities.

Because of the haphazard handling and disposal of the wastes from the destroyed well, the U.S Coast Guard and the EPA leaned on BP and increased their oversight of the company's

waste management plan approved on June 13, 2010 (U.S. Environmental Protection Agency 2010). BP hired private contractors, including Waste Management, Inc., the nation's largest trash hauler, to cart away and dispose of thousands of tons of polluted sand, crude-coated boom and refuse that washed ashore.

In a January 12, 2010, letter, EPA administrator Lisa P. Jackson declared environmental justice as one of "seven priorities" for EPA's future (Raines 2010a, 2010b). However, no environmental justice or equity analysis was conducted with regard to where the BP oil-spill cleanup waste actually ended up. Some community leaders insist that such an analysis should have accompanied the waste management plan before the EPA and the U.S. Coast Guard approved any landfill facilities.

Although people of color make up about 26 percent of the coastal counties in Alabama, Florida, Mississippi, and Louisiana, government officials approved a plan that would allow most of the BP oil waste to be trucked to communities often short-changed in terms of environmental justice. For example, on July 15, 2010—the earliest reporting period—39,399 tons of BP waste went to nine landfills; of this, 21,867 tons (55.4 percent) were disposed of in communities of color. More than 30,338 tons (77.0 percent) of oil waste went to communities where the percentage of people of color was greater than the percentage of people of color in the host county.

As of April 10, 2011—the latest reporting period—106,409 tons of BP waste had gone to eleven landfills. Of this amount, 45,032 tons (42.3 percent) went to landfills in communities where a majority of the residents are people of color, and 90,554 tons (85.1 percent) went to landfills located in communities whose percentage of people of color population exceeded the county's percentage. Clearly, one year after the BP oil disaster, communities with high percentages of minority residents still bear the brunt of the oil-waste disposal. Residents who live in fenceline communities abutting landfills are invisible and forgotten Americans—another injustice that needs to be corrected.

Even as the Obama administration oversaw BP's waste management plan, the oil giant was allowed to dump oil-spill waste on a disproportionately large share of African Americans and communities of other people of color in the Gulf Coast states. This targeting of people of color for BP oil-spill waste is consistent with past practices in the region.

The two government-approved landfills in Mississippi are located in mostly white communities. The disposal of BP waste in the Pecan Grove landfill in Harrison County and in

the Central landfill in Pearl River County generated an inordinate amount of media and government attention, unlike that generated when similar waste was dumped in mostly black communities (Farrell 2011). Oil-spill waste was dumped in the Harrison County Pecan Grove landfill over the objections of county supervisors (Scallan 2010). However, because of a “contingency plan,” as of mid-July 2010, no BP oil waste had made its way to the Central landfill in Pearl River County. Dan Bell, the market area engineer for Waste Management, Inc., informed Pearl County supervisors that there was no “economic value” in dumping any of the oil-spill waste at its Central landfill. Ball added, “It is just more feasible right now and closer to the site at this time to use Pecan Grove. Right now we have no plans to use Central Landfill, but that could change tomorrow.”

Clearly, Environmental Justice Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” signed by President Bill Clinton in 1994, requires the EPA and the U.S. Coast Guard to do a better job of monitoring where waste from spills like the BP oil spill ends up to ensure that minority and low-income populations do not bear an adverse and disproportionate share of the burdens and negative impacts associated with such spills. Allowing BP, the Gulf Coast states, and the private disposal industry to select where the oil-spill waste is dumped only adds to the legacy of unequal protection.

Conclusion

The environmental protection apparatus in the United States is broken. The current system fails to provide equal protection for all communities. The environment justice movement emerged in response to environmental inequities, threats to public health, unequal protection, differential enforcement, and disparate treatment received by the poor and people of color. The movement redefined environmentalism protection as a basic right. It also emphasized pollution prevention, waste minimization, and cleaner production techniques as strategies to achieve environmental justice for all Americans without regard to race, color, national origin, or income.

The movement set out clear goals of eliminating unequal enforcement of environmental, civil rights, and public health laws, differential exposure of some populations to harmful chemicals, pesticides, and other toxins in the home, school, neighborhood, and workplace, faulty assumptions in calculating, assessing, and managing risks, discriminatory zoning and land-use

practices, and exclusionary policies and practices that limit some individuals and groups from participation in decision making. Many of these problems could be eliminated if the existing environmental, health, housing, and civil rights laws were vigorously enforced in a nondiscriminatory way.

Environmental justice leaders are demanding that no community or nation, rich or poor, urban or suburban, black or white, should be allowed to become a "sacrifice zone" or dumping grounds. They are also pressing governments to live up to their mandate of protecting public health and the environment. The legacy of environmental injustice remains a major barrier that impedes millions of people of color from achieving healthy, livable, and sustainable communities. It is unlikely that we as a nation can achieve the goals of sustainability until we address these equity issues.

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