

their demands on the environment are far less intense, and they can draw upon a reservoir of cooperative social institutions and local ecological knowledge in managing the “commons”—forests, grasslands, and the waters—on a sustainable basis. If colonial and capitalist expansion has both accentuated social inequalities and signaled a precipitous fall in ecological wisdom, an alternate ecology must rest on an alternate society and polity as well.

This brief overview of German and Indian environmentalism has some major implications for deep ecology. Both German and Indian environmental traditions allow for a greater integration of ecological concerns with livelihood and work. They also place a greater emphasis on equity and social justice (both within individual countries and on a global scale) on the grounds that in the absence of social regeneration environmental regeneration has very little chance of succeeding. Finally, and perhaps most significantly, they have escaped the preoccupation with wilderness preservation so characteristic of American cultural and environmental history.

IV. A HOMILY

In 1958, the economist J. K. Galbraith referred to overconsumption as the unasked question of the American conservation movement. There is a marked selectivity, he wrote, “in the conservationist’s approach to materials consumption. If we are concerned about our great appetite for materials, it is plausible to seek to increase the supply, to decrease waste, to make better use of the stocks available, and to develop substitutes. But what of

the appetite itself? Surely this is the ultimate source of the problem. If it continues its geometric course, will it not one day have to be restrained? Yet in the literature of the resource problem this is the forbidden question. Over it hangs a nearly total silence.”

The consumer economy and society have expanded tremendously in the three decades since Galbraith penned these words; yet his criticisms are nearly as valid today. I have said “nearly,” for there are some hopeful signs. Within the environmental movement several dispersed groups are working to develop ecologically benign technologies and to encourage less wasteful life styles. Moreover, outside the self-defined boundaries of American environmentalism, opposition to the permanent war economy is being carried on by a peace movement that has a distinguished history and impeccable moral and political credentials.

It is precisely these (to my mind, most hopeful) components of the American social scene that are missing from deep ecology. In their widely noticed book, Bill Devall and George Sessions make no mention of militarization or the movements for peace, while activists whose practical focus is on developing ecologically responsible life styles (e.g., Wendell Berry) are derided as “falling short of deep ecological awareness.” A truly radical ecology in the American context ought to work toward a synthesis of the appropriate technology, alternate life style, and peace movements. By making the (largely spurious) anthropocentric-biocentric distinction central to the debate, deep ecologists may have appropriated the moral high ground, but they are at the same time doing a serious disservice to American and global environmentalism.

STUDY QUESTIONS

1. Is Guha’s critique of deep ecology sound? How would a full application of deep ecology affect the Third World? Explain.
2. How might deep ecologists like Naess or Devall and Sessions (Readings 21–23) respond to Guha’s criticisms?
3. How might Western environmentalists justify emphasizing quality of life over sheer survival?

Overcoming Racism in Environmental Decision Making

ROBERT D. BULLARD

Robert Bullard is a professor of sociology and the director of the Environmental Justice Resource Center at Clark Atlanta University. Named one of thirteen Environmental Leaders of the Century by Newsweek in 2008, he is arguably the most visible leader of the environmental justice movement. He has written and edited eighteen books on environmental justice issues, including Dumping in Dixie: Race, Class and Environmental Quality (1990), Just Sustainabilities: Development in an Unequal World (2003), and The Wrong Complexion for Protection: How the Government Response to Disaster Endangers African American Communities (2012).

In this essay, Bullard makes the case that environmental burdens such as air pollution and toxic waste dumps are unjustly distributed by race and class. He analyzes the kind of injustice involved, claiming that environmental decision making often involves a lack of procedural equity, geographical equity, and/or social equity. He concludes by proposing five principles of environmental justice that governments ought to adopt: guaranteeing the right to environmental protection, preventing harm before it occurs, shifting the burden of proof to the polluters, obviating proof of intent to discriminate, and redressing existing inequities.

Despite the recent attempts by federal agencies to reduce environmental and health threats in the United States, inequities persist.¹ If a community is poor or inhabited largely by people of color, there is a good chance that it receives less protection than a community that is affluent or white.² This situation is a result of the country’s environmental policies, most of which “distribute the costs in a regressive pattern while providing disproportionate benefits for the educated and wealthy.”³ Even the Environmental Protection Agency (EPA) was not designed to address environmental policies and practices that result in unfair outcomes. The agency has yet to conduct a single piece of disparate impact research using primary data. In fact, the current

environmental protection paradigm has institutionalized unequal enforcement; traded human health for profit; placed the burden of proof on the “victims” rather than on the polluting industry; legitimated human exposure to harmful substances; promoted “risky” technologies such as incinerators; exploited the vulnerability of economically and politically disenfranchised communities; subsidized ecological destruction; created an industry around risk assessment; delayed cleanup actions; and failed to develop pollution prevention as the overarching and dominant strategy. As a result, low-income and minority communities continue to bear greater health and environmental burdens, while the more affluent and whites receive the bulk of the benefits.⁴

Robert D. Bullard, “Overcoming Racism in Environmental Decision Making,” *Resources for the Future*, Wash., DC. Reprinted by permission of Robert D. Bullard.

The geographic distribution of both minorities and the poor has been found to be highly correlated to the distribution of air pollution; municipal landfills and incinerators; abandoned toxic waste dumps; lead poisoning in children; and contaminated fish consumption.⁵ Virtually all studies of exposure to outdoor air pollution have found significant differences in exposure by income and race. Moreover, the race correlation is even stronger than the class correlation.⁶ The National Wildlife Federation recently reviewed some 64 studies of environmental disparities; in all but one, disparities were found by either race or income, and disparities by race were more numerous than those by income. When race and income were compared for significance, race proved to be the more important factor in 22 out of 30 tests.⁷ And researchers at Argonne National Laboratory recently found that

In 1990, 437 of the 3,109 counties and independent cities failed to meet at least one of the EPA ambient air quality standards. . . . 57 percent of whites, 65 percent of African-Americans, and 80 percent of Hispanics live in 437 counties with substandard air quality. Out of the whole population, a total of 33 percent of whites, 50 percent of African-Americans, and 60 percent of Hispanics live in the 136 counties in which two or more air pollutants exceed standards. The percentage living in the 29 counties designated as non-attainment areas for three or more pollutants are 12 percent of whites, 20 percent of African-Americans, and 31 percent of Hispanics.⁸

The public health community has very little information on the magnitude of many air pollution-related health problems. For example, scientists are at a loss to explain the rising number of deaths from asthma in recent years. However, it is known that persons suffering from asthma are particularly sensitive to the effects of carbon monoxide, sulfur dioxide, particulate matter, ozone, and oxides of nitrogen.⁹

Current environmental decision making operates at the juncture of science, technology, economics, politics, special interests, and ethics and mirrors the larger social milieu where discrimination is institutionalized. Unequal environmental protection undermines three basic types of equity: procedural, geographic, and social.

PROCEDURAL EQUITY

Procedural equity refers to fairness—that is, to the extent that governing rules, regulations, evaluation criteria, and enforcement are applied in a nondiscriminatory way. Unequal protection results from nonscientific and undemocratic decisions, such as exclusionary practices, conflicts of interest, public hearings held in remote locations and at inconvenient times, and use of only English to communicate with and conduct hearings for non-English-speaking communities.

A 1992 study by staff writers from the *National Law Journal* uncovered glaring inequities in the way EPA enforces its Superfund laws:

There is a racial divide in the way the U.S. government cleans up toxic waste sites and punishes polluters. White communities see faster action, better results and stiffer penalties than communities where blacks, Hispanics and other minorities live. This unequal protection often occurs whether the community is wealthy or poor.¹⁰

After examining census data, civil court dockets, and EPA's own record of performance at 1,177 Superfund toxic waste sites, the authors of the *National Law Journal* report revealed the following:

- Penalties applied under hazardous waste laws at sites having the greatest white population were 500 percent higher than penalties at sites with the greatest minority population. Penalties averaged out at \$335,566 at sites in white areas but just \$55,318 at sites in minority areas.
- The disparity in penalties applied under the toxic waste law correlates with race alone, not income. The average penalty in areas with the

lowest median income is \$113,491—3 percent more than the average penalty in areas with the highest median income.

- For all the federal environmental laws aimed at protecting citizens from air, water, and waste pollution, penalties for noncompliance were 46 percent higher in white communities than in minority communities.
- Under the Superfund cleanup program, abandoned hazardous waste sites in minority areas take 20 percent longer to be placed on the National Priority List than do those in white areas.
- In more than half of the 10 autonomous regions that administer EPA programs around the country, action on cleanup at Superfund sites begins from 12 to 42 percent later at minority sites than at white sites.
- For minority sites, EPA chooses “containment,” the capping or walling off of a hazardous waste dump site, 7 percent more frequently than the cleanup method preferred under the law: permanent “treatment” to eliminate the waste or rid it of its toxins. For white sites, EPA orders permanent treatment 22 percent more often than containment.¹¹

These findings suggest that unequal environmental protection is placing communities of color at risk. The *National Law Journal* study supplements the findings of several earlier studies and reinforces what grassroots activists have been saying all along. . . . Not only are people of color differentially affected by industrial pollution but they can expect different treatment from the government.¹²

GEOGRAPHIC EQUITY

Geographic equity refers to the location and spatial configuration of communities and their proximity to environmental hazards and locally unwanted land uses (LULUs), such as landfills, incinerators, sewage treatment plants, lead smelters, refineries, and other noxious facilities. Hazardous waste incinerators are not randomly scattered across the

landscape. Communities with hazardous waste incinerators generally have large minority populations, low incomes, and low property values.¹³

A 1990 Greenpeace report, *Playing with Fire*, found that communities with existing incinerators have 89 percent more people of color than the national average; communities where incinerators are proposed for construction have minority populations that are 60 percent higher than the national average; the average income in communities with existing incinerators is 15 percent lower than the national average; property values in communities that host incinerators are 38 percent lower than the national average; and average property values are 35 percent lower in communities where incinerators have been proposed.¹⁴

The industrial encroachment into Chicago's Southside neighborhoods is a classic example of geographic inequity. Chicago is the nation's third largest city and one of the most racially segregated cities in the country. More than 92 percent of the city's 1.1 million African-American residents live in racially segregated areas. The Altgeld Gardens housing project, located on the city's southeast side, is one of these segregated enclaves. The neighborhood is home to 150,000 residents, of whom 70 percent are African-American and 11 percent are Latino.

Altgeld Gardens is encircled by municipal and hazardous waste landfills, toxic waste incinerators, grain elevators, sewage treatment facilities, smelters, steel mills, and a host of other polluting industries.¹⁵ Because of its location, Hazel Johnson, a community organizer in the neighborhood, has dubbed the area a “toxic doughnut.” There are 50 active or closed commercial hazardous waste landfills; 100 factories, including 7 chemical plants and 5 steel mills; and 103 abandoned toxic waste dumps.¹⁶

Currently, health and risk assessment data collected by the state of Illinois and EPA for facility permitting have failed to take into account the cumulative and synergistic effects of having so many “layers” of poisons in one community. Altgeld Gardens residents wonder when the government will declare a moratorium on permitting any new noxious facilities in their neighborhood and when

the existing problems will be cleaned up. All of the polluting industries imperil the health of nearby residents and should be factored into future facility-permitting decisions.

In the Los Angeles air basin, 71 percent of African-Americans and 50 percent of Latinos live in areas with the most polluted air, whereas only 34 percent of whites live in highly polluted areas.¹⁷ The “dirtiest” zip code in California (90058) is sandwiched between South-Central Los Angeles and East Los Angeles.¹⁸ The one-square-mile area is saturated with abandoned toxic waste sites, freeways, smokestacks, and wastewater pipes from polluting industries. Some 18 industrial firms in 1989 discharged more than 33 million pounds of waste chemicals into the environment.

Unequal protection may result from land-use decisions that determine the location of residential amenities and disamenities. Unincorporated communities of poor African-Americans suffer a “triple” vulnerability to noxious facility siting.¹⁹ For example, Wallace, Louisiana, a small unincorporated African-American community located on the Mississippi River, was rezoned from residential to industrial use by the mostly white officials of St. John the Baptist Parish to allow construction of a Formosa Plastics Corporation plant. The company’s plants have been major sources of pollution in Baton Rouge, Louisiana; Point Comfort, Texas; Delaware City, Delaware; and its home country of Taiwan.²⁰ Wallace residents have filed a lawsuit challenging the rezoning action as racially motivated.

Environmental justice advocates have sought to persuade federal, state, and local governments to adopt policies that address distributive impacts, concentration, enforcement, and compliance concerns. Some states have tried to use a “fair share” approach to come closer to geographic equity. In 1990, New York City adopted a fair share legislative model designed to ensure that every borough and every community within each borough bears its fair share of noxious facilities. Public hearings have begun to address risk burdens in New York City’s boroughs.

Testimony at a hearing on environmental disparities in the Bronx points to concerns raised by

African-Americans and Puerto Ricans who see their neighborhoods threatened by garbage transfer stations, salvage yards, and recycling centers:

On the Hunts Point peninsula alone there are at least thirty private transfer stations, a large-scale Department of Environmental Protection (DEP) sewage treatment plant and a sludge dewatering facility, two Department of Sanitation (DOS) marine transfer stations, a citywide private regulated medical waste incinerator, a proposed DOS resource recovery facility and three proposed DEP sludge processing facilities. That all of the facilities listed above are located immediately adjacent to the Hunts Point Food Center, the biggest wholesale food and meat distribution facility of its kind in the United States, and the largest source of employment in the South Bronx, is disconcerting. A policy whereby low-income and minority communities have become the “dumping grounds” for unwanted land uses, works to create an environment of disincentives to community-based development initiatives. It also undermines existing businesses.²¹

Some communities form a special case for environmental justice. For example, Native American reservations are geographic entities but are also quasi-sovereign nations. Because of less stringent environmental regulations than those at the state and federal levels, Native American reservations from New York to California have become prime targets for risky technologies.²² Indian nations do not fall under state jurisdiction. Similarly, reservations have been described as the “lands the feds forgot.”²³ More than 100 industries, ranging from solid waste landfills to hazardous waste incinerators and nuclear waste storage facilities, have targeted reservations.²⁴

SOCIAL EQUITY

Social equity refers to the role of sociological factors, such as race, ethnicity, class, culture, lifestyles,

and political power, in environmental decision-making. Poor people and people of color often work in the most dangerous jobs and live in the most polluted neighborhoods, and their children are exposed to all kinds of environmental toxins on the playgrounds and in their homes and schools.

Some government actions have created and exacerbated environmental inequity. More stringent environmental regulations have driven noxious facilities to follow the path of least resistance toward poor, overburdened communities. Governments have even funded studies that justify targeting economically disenfranchised communities for noxious facilities. Cerrell Associates, Inc., a Los Angeles-based consulting firm, advised the state of California on facility siting and concluded that “ideally . . . officials and companies should look for lower socioeconomic neighborhoods that are also in a heavy industrial area with little, if any, commercial activity.”²⁵

The first state-of-the-art solid waste incinerator slated to be built in Los Angeles was proposed for the South-Central Los Angeles neighborhood. The city-sponsored project was defeated by local residents.²⁶ The two permits granted by the California Department of Health Services for state-of-the-art toxic waste incinerators were proposed for mostly Latino communities: Vernon, near East Los Angeles, and Kettleman City, a farm worker community in the agriculturally rich Central Valley. Kettleman City has 1,200 residents, of which 95 percent are Latino. It is home to the largest hazardous waste incinerator west of the Mississippi River. The Vernon proposal was defeated, but the Kettleman City proposal is still pending.

PRINCIPLES OF ENVIRONMENTAL JUSTICE

To end unequal environmental protection, governments should adopt five principles of environmental justice: guaranteeing the right to environmental protection, preventing harm before it occurs, shifting the burden of proof to the polluters, obviating proof of intent to discriminate, and redressing existing inequities.

The Right to Protection

Every individual has a right to be protected from environmental degradation. Protecting this right will require enacting a federal “fair environmental protection act.” The act could be modeled after the various federal civil rights acts that have promoted nondiscrimination—with the ultimate goal of achieving “zero tolerance”—in such areas as housing, education, and employment. The act ought to address both the intended and unintended effects of public policies and industrial practices that have a disparate impact on racial and ethnic minorities and other vulnerable groups. The precedents for this framework are the Civil Rights Act of 1964, which attempted to address both de jure and de facto school segregation, the Fair Housing Act of 1968, the same act as amended in 1988, and the Voting Rights Act of 1965.

For the first time in the agency’s 23-year history, EPA’s Office of Civil Rights has begun investigating charges of environmental discrimination under Title VI of the 1964 Civil Rights Act. The cases involve waste facility siting disputes in Michigan, Alabama, Mississippi, and Louisiana. Similarly, in September 1993, the U.S. Civil Rights Commission issued a report entitled *The Battle for Environmental Justice in Louisiana: Government, Industry, and the People*. This report confirmed what most people who live in “Cancer Alley”—the 85-mile stretch along the Mississippi River from Baton Rouge to New Orleans—already knew: African-American communities along the Mississippi River bear disproportionate health burdens from industrial pollution.²⁷

A number of bills have been introduced into Congress that address some aspect of environmental justice:

- The “Environmental Justice Act of 1993” (H.R. 2105) would provide the federal government with the statistical documentation and ranking of the top 100 “environmental high impact areas” that warrant attention.
- The “Environmental Equal Rights Act of 1993” (H.R. 1924) seeks to amend the Solid Waste Act and would prevent waste facilities from being sited in “environmentally disadvantaged communities.”

- The “Environmental Health Equity Information Act of 1993” (H.R. 1925) seeks to amend the Comprehensive Environmental Response, Compensation, and Liability Act of 1990 (CERCLA) to require the Agency for Toxic Substances and Disease Registry to collect and maintain information on the race, age, gender, ethnic origin, income level, and educational level of persons living in communities adjacent to toxic substance contamination.
- The “Waste Export and Import Prohibition Act” (H.R. 3706) would ban waste exports as of 1 July 1994 to countries that are not members of the Organization for Economic Cooperation and Development (OECD); the bill would also ban waste exports to and imports from OECD countries as of 1 January 1999.

The states are also beginning to address environmental justice concerns. Arkansas and Louisiana were the first two to enact environmental justice laws. Virginia has passed a legislative resolution on environmental justice. California, Georgia, New York, North Carolina, and South Carolina have pending legislation to address environmental disparities.

Environmental justice groups have succeeded in getting President Clinton to act on the problem of unequal environmental protection, an issue that has been buried for more than three decades. On 11 February 1994, Clinton signed an executive order entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” This new executive order reinforces what has been law since the passage of the 1964 Civil Rights Act, which prohibits discriminatory practices in programs receiving federal financial assistance.

The executive order also refocuses attention on the National Environmental Policy Act of 1970 (NEPA), which established national policy goals for the protection, maintenance, and enhancement of the environment. The express goal of NEPA is to ensure for all U.S. citizens a safe, healthful,

productive, and aesthetically and culturally pleasing environment. NEPA requires federal agencies to prepare detailed statements on the environmental effects of proposed federal actions significantly affecting the quality of human health. Environmental impact statements prepared under NEPA have routinely downplayed the social impacts of federal projects on racial and ethnic minorities and low-income groups.

Under the new executive order, federal agencies and other institutions that receive federal monies have a year to implement an environmental justice strategy. For these strategies to be effective, agencies must move away from the “DAD” (decide, announce, and defend) modus operandi. EPA cannot address all of the environmental injustices alone but must work in concert with other stakeholders, such as state and local governments and private industry. A new interagency approach might include the following:

- Grassroots environmental justice groups and their networks must become full partners, not silent or junior partners, in planning the implementation of the new executive order.
- An advisory commission should include representatives of environmental justice, civil rights, legal, labor, and public health groups, as well as the relevant governmental agencies, to advise on the implementation of the executive order.
- State and regional education, training, and outreach forums and workshops on implementing the executive order should be organized.
- The executive order should become part of the agenda of national conferences and meetings of elected officials, civil rights and environmental groups, public health and medical groups, educators, and other professional organizations.

The executive order comes at an important juncture in this nation’s history: Few communities are willing to welcome LULUs or to become dumping grounds for other people’s garbage, toxic

waste, or industrial pollution. In the real world, however, if a community happens to be poor and inhabited by persons of color, it is likely to suffer from a “double whammy” of unequal protection and elevated health threats. This is unjust and illegal.

The civil rights and environmental laws of the land must be enforced even if it means the loss of a few jobs. This argument was a sound one in the 1860s, when the 13th Amendment to the Constitution, which freed the slaves in the United States, was passed over the opposition of proslavery advocates who posited that the new law would create unemployment (slaves had a zero unemployment rate), drive up wages, and inflict undue hardship on the plantation economy.

Prevention of Harm

Prevention, the elimination of the threat before harm occurs, should be the preferred strategy of governments. For example, to solve the lead problem, the primary focus should be shifted from treating children who have been poisoned to eliminating the threat by removing lead from houses.

Overwhelming scientific evidence exists on the ill effects of lead on the human body. However, very little action has been taken to rid the nation’s housing of lead even though lead poisoning is a preventable disease tagged the “number one environmental health threat to children.”²⁸

Lead began to be phased out of gasoline in the 1970s. It is ironic that the “regulations were initially developed to protect the newly developed catalytic converter in automobiles, a pollution-control device that happens to be rendered inoperative by lead, rather than to safeguard human health.”²⁹ In 1971, a child was not considered “at risk” unless he or she had 40 micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dl}$). Since that time, the amount of lead that is considered safe has continually dropped. In 1991, the U.S. Public Health Service changed the official definition of an unsafe level to 10 $\mu\text{g}/\text{dl}$. Even at that level, a child’s IQ can be slightly diminished and physical growth stunted.

Lead poisoning is correlated with both income and race. In 1988, the Agency for Toxic Substances

and Disease Registry found that, among families earning less than \$6,000, 68 percent of African-American children had lead poisoning, as opposed to 36 percent of white children.³⁰ In families with incomes exceeding \$15,000, more than 38 percent of African-American children suffered from lead poisoning, compared with 12 percent of white children. Thus, even when differences in income are taken into account, middle-class African-American children are three times more likely to be poisoned with lead than are their middle-class white counterparts.

A 1990 report by the Environmental Defense Fund estimated that, under the 1991 standard of 10 $\mu\text{g}/\text{dl}$, 96 percent of African-American children and 80 percent of white children of poor families who live in inner cities have unsafe amounts of lead in their blood—amounts sufficient to reduce IQ somewhat, harm hearing, reduce the ability to concentrate, and stunt physical growth.³¹ Even in families with annual incomes greater than \$15,000, 85 percent of urban African-American children have unsafe lead levels, compared to 47 percent of white children.

In the spring of 1991, the Bush administration announced an ambitious program to reduce lead exposure of children, including widespread testing of homes, certification of those who remove lead from homes, and medical treatment for affected children. Six months later, the Centers for Disease Control announced that the administration “does not see this as a necessary federal role to legislate or regulate the cleanup of lead poisoning, to require that homes be tested, to require home owners to disclose results once they are known, or to establish standards for those who test or clean up lead hazards.”³²

According to the *New York Times*, the National Association of Realtors pressured President Bush to drop his lead initiative because they feared that forcing homeowners to eliminate lead hazards would add from \$5,000 to \$10,000 to the price of those homes, further harming a real estate market already devastated by the aftershocks of Reaganomics.³³ The public debate has pitted real estate and housing interests against public health interests. Right now, the housing interests appear to be winning.

For more than two decades, Congress and the nation's medical and public health establishments have waffled, procrastinated, and shuffled papers while the lead problem steadily grows worse. During the years of President Reagan's "benign neglect," funding dropped very low. Even in the best years, when funding has risen to as much as \$50 million per year, it has never reached levels that would make a real dent in the problem.

Much could be done to protect at-risk populations if the current laws were enforced. For example, a lead smelter operated for 50 years in a predominately African-American West Dallas neighborhood, where it caused extreme health problems for nearby residents. Dallas officials were informed as early as 1972 that lead from three lead smelters was finding its way into the bloodstreams of children who lived in two mostly African-American and Latino neighborhoods: West Dallas and East Oak Cliff.³⁴

Living near the RSR and Dixie Metals smelters was associated with a 36-percent increase in childhood blood lead levels. The city was urged to restrict the emissions of lead into the atmosphere and to undertake a large screening program to determine the extent of the public health problem. The city failed to take immediate action to protect the residents who lived near the smelters.

In 1980, EPA, informed about possible health risks associated with the Dallas lead smelters, commissioned another lead-screening study. This study confirmed what was already known a decade earlier: Children living near the Dallas smelters were likely to have greater lead concentrations in their blood than children who did not live near the smelters.³⁵

The city only took action after the local newspapers published a series of headline-grabbing stories in 1983 on the "potentially dangerous" lead levels discovered by EPA researchers in 1981.³⁶ The articles triggered widespread concern, public outrage, several class-action lawsuits, and legal action by the Texas attorney general.

Although EPA was armed with a wealth of scientific data on the West Dallas lead problem, the agency chose to play politics with the community

by scrapping a voluntary plan offered by RSR to clean up the "hot spots" in the neighborhood. John Hernandez, EPA's deputy administrator, blocked the cleanup and called for yet another round of tests to be designed by the Centers for Disease Control with EPA and the Dallas Health Department. The results of the new study were released in February 1983. Again, this study established the smelter as the source of elevated lead levels in West Dallas children.³⁷ Hernandez's delay of cleanup actions in West Dallas was tantamount to waiting for a body count.³⁸

After years of delay, the West Dallas plaintiffs negotiated an out-of-court settlement worth more than \$45 million. The lawsuit was settled in June 1983 as RSR agreed to pay for cleaning up the soil in West Dallas, a blood-testing program for children and pregnant women, and the installation of new antipollution equipment. The settlement was made on behalf of 370 children—almost all of whom were poor, black residents of the West Dallas public housing project—and 40 property owners. The agreement was one of the largest community lead-contamination settlements ever awarded in the United States.³⁹ The settlement, however, did not require the smelter to close. Moreover, the pollution equipment for the smelter was never installed.

In May 1984, however, the Dallas Board of Adjustments, a city agency responsible for monitoring land-use violations, asked the city attorney to close the smelter permanently for violating the city's zoning code. The lead smelter had operated in the mostly African-American West Dallas neighborhood for 50 years without having the necessary use permits. Just four months later, the West Dallas smelter was permanently closed. After repeated health citations, fines, and citizens' complaints against the smelter, one has to question the city's lax enforcement of health and land-use regulations in African-American and Latino neighborhoods.

The smelter is now closed. Although an initial cleanup was carried out in 1984, the lead problem has not gone away.⁴⁰ On 31 December 1991, EPA crews began a cleanup of the West Dallas neighborhood. It is estimated that the crews will remove

between 30,000 and 40,000 cubic yards of lead-contaminated soil from several West Dallas sites, including school property and about 140 private homes. The project will cost EPA from \$3 million to \$4 million. The lead content of the soil collected from dump sites in the neighborhood ranged from 8,060 to 21,000 parts per million.⁴¹ Under federal standards, levels of 500 to 1,000 parts per million are considered hazardous. In April 1993, the entire West Dallas neighborhood was declared a Superfund site.

There have been a few other signs related to the lead issue that suggest a consensus on environmental justice is growing among coalitions of environmental, social justice, and civil libertarian groups. The Natural Resources Defense Council, the National Association for the Advancement of Colored People Legal Defense and Education Fund, the American Civil Liberties Union, and the Legal Aid Society of Alameda County joined forces and won an out-of-court settlement worth between \$15 million and \$20 million for a blood-testing program in California. The lawsuit (*Matthews v. Coye*) arose because the state of California was not performing the federally mandated testing of some 557,000 poor children who receive Medicaid. This historic agreement will likely trigger similar actions in other states that have failed to perform federally mandated screening.⁴²

Lead screening is important but it is not the solution. New government-mandated lead abatement initiatives are needed. The nation needs a "Lead Superfund" cleanup program. Public health should not be sacrificed even in a sluggish housing market. Surely, if termite inspections (required in both booming and sluggish housing markets) can be mandated to protect individual home investment, a lead-free home can be mandated to protect human health. Ultimately, the lead debate—public health (who is affected) versus property rights (who pays for cleanup)—is a value conflict that will not be resolved by the scientific community.

Shift the Burden of Proof

Under the current system, individuals who challenge polluters must prove that they have been

harmed, discriminated against, or disproportionately affected. Few poor or minority communities have the resources to hire the lawyers, expert witnesses, and doctors needed to sustain such a challenge. Thus, the burden of proof must be shifted to the polluters who do harm, discriminate, or do not give equal protection to minorities and other overburdened classes.

Environmental justice would require the entities that are applying for operating permits for landfills, incinerators, smelters, refineries, and chemical plants, for example, to prove that their operations are not harmful to human health, will not disproportionately affect minorities or the poor, and are nondiscriminatory.

A case in point is Louisiana Energy Services' proposal to build the nation's first privately owned uranium enrichment plant. The proposed plant would handle about 17 percent of the estimated U.S. requirement for enrichment services in the year 2000. Clearly, the burden of proof should be on Louisiana Energy Services, the state government, and the Nuclear Regulatory Commission to demonstrate that local residents' rights would not be violated in permitting the plant. At present, the burden of proof is on local residents to demonstrate that their health would be endangered and their community adversely affected by the plant.

According to the Nuclear Regulatory Commission's 1993 draft environmental impact statement, the proposed site for the facility is Claiborne Parish, Louisiana, which has a per-capita income of only \$5,800 per year—just 45 percent of the national average.⁴³ The enrichment plant would be just one-quarter mile from the almost wholly African-American community of Center Springs, founded in 1910, and one and one-quarter miles from Forest Grove, which was founded by freed slaves. However, the draft statement describes the socioeconomic and community characteristics of Homer, a town that is five miles from the proposed site and whose population is more than 50 percent white, rather than those of Center Springs or Forest Grove. As far as the draft is concerned, the communities of Center Springs and Forest Grove do not exist; they are invisible.

The racial composition of Claiborne Parish is 53.43 percent white, 46.09 percent African-American, 0.16 percent American Indian, 0.07 percent Asian, 0.23 percent Hispanic, and 0.01 percent "other."⁴⁴ Thus, the parish's percentage population of African-Americans is nearly four times greater than that of the nation and nearly two and one-half times greater than that of Louisiana. (African-Americans composed 12 percent of the U.S. population and 29 percent of Louisiana's population in 1990.)

Clearly, Claiborne Parish's current residents would receive fewer of the plant's potential benefits—high-paying jobs, home construction, and an increased tax base—than would those who moved into the area or commuted to it to work at the facility. An increasing number of migrants will take jobs at the higher end of the skill and pay scale. These workers are expected to buy homes outside of the parish. Residents of Claiborne Parish, on the other hand, are likely to get the jobs at the lower end of the skill and pay scale.⁴⁵

Ultimately, the plant's social costs would be borne by nearby residents, while the benefits would be more dispersed. The potential social costs include increased noise and traffic, threats to public safety and to mental and physical health, and LULUs.

The case of Richmond, California, provides more evidence of the need to shift the burden of proof. A 1989 study, *Richmond at Risk*, found that the African-American residents of this city bear the brunt of toxic releases in Contra Costa County and the San Francisco Bay area.⁴⁶ At least 38 industrial sites in and around the city store up to 94 million pounds of 45 different chemicals, including ammonia, chlorine, hydrogen fluoride, and nitric acid. However, the burden of proof is on Richmond residents to show that they are harmed by nearby toxic releases.

On 26 July 1993, sulfur trioxide escaped from the General Chemical plant in Richmond, where people of color make up a majority of the residents. More than 20,000 citizens were sent to the hospital. A September 1993 report by the Bay Area Air Quality Management District confirmed that "the operation was conducted in a negligent manner without due regard to the potential consequences

of a miscalculation or equipment malfunction, and without required permits from the District."⁴⁷

When Richmond residents protested the planned expansion of a Chevron refinery, they were asked to prove that they had been harmed by Chevron's operation. Recently, public pressure has induced Chevron to set aside \$4.2 million to establish a new health clinic and help the surrounding community.

A third case involves conditions surrounding the 1,900 *maquiladoras*, assembly plants operated by U.S., Japanese, and other countries' companies along the 2,000-mile U.S.-Mexican border.⁴⁸ A 1983 agreement between the United States and Mexico requires U.S. companies in Mexico to export their waste products to the United States, and plants must notify EPA when they are doing so. However, a 1986 survey of 772 *maquiladoras* revealed that only 20 of the plants informed EPA when they were exporting waste to the United States, even though 86 percent of the plants used toxic chemicals in their manufacturing processes. And in 1989, only 10 waste shipment notices were filed with EPA.⁴⁹

Much of the waste from the *maquiladoras* is illegally dumped in sewers, ditches, and the desert. All along the Rio Grande, plants dump toxic wastes into the river, from which 95 percent of the region's residents get their drinking water. In the border cities of Brownsville, Texas, and Matamoros, Mexico, the rate of anencephaly—being born without a brain—is four times the U.S. national average.⁵⁰ Affected families have filed lawsuits against 88 of the area's 100 *maquiladoras* for exposing the community to xylene, a cleaning solvent that can cause brain hemorrhages and lung and kidney damage. However, as usual, the burden of proof rests with the victims. Unfortunately, Mexico's environmental regulatory agency is understaffed and ill-equipped to enforce the country's environmental laws adequately.

Obviate Proof of Intent

Laws must allow disparate impact and statistical weight—as opposed to "intent"—to infer discrimination because proving intentional or purposeful

discrimination in a court of law is next to impossible. The first lawsuit to charge environmental discrimination in the placement of a waste facility, *Bean v. Southwestern Waste*, was filed in 1979. The case involved residents of Houston's Northwood Manor, a suburban, middle-class neighborhood of homeowners, and Browning-Ferris Industries, a private disposal company based in Houston.

More than 83 percent of the residents in the subdivision owned their single-family, detached homes. Thus, the Northwood Manor neighborhood was an unlikely candidate for a municipal landfill except that, in 1978, it was more than 82 percent black. An earlier attempt had been made to locate a municipal landfill in the same general area in 1970, when the subdivision and local school district had a majority white population. The 1970 landfill proposal was killed by the Harris County Board of Supervisors as being an incompatible land use; the site was deemed to be too close to a residential area and a neighborhood school. In 1978, however, the controversial sanitary landfill was built only 1,400 feet from a high school, football stadium, track field, and the North Forest Independent School District's administration building.⁵¹ Because Houston has been and continues to be highly segregated, few Houstonians are unaware of where the African-American neighborhoods end and the white ones begin. In 1970, for example, more than 90 percent of the city's African-American residents lived in mostly black areas. By 1980, 82 percent of Houston's African-American population lived in mostly black areas.⁵²

Houston is the only major U.S. city without zoning. In 1992, the city council voted to institute zoning, but the measure was defeated at the polls in 1993. The city's African-American neighborhoods have paid a high price for the city's unrestrained growth and lack of a zoning policy. Black Houston was allowed to become the dumping ground for the city's garbage. In every case, the racial composition of Houston's African-American neighborhoods had been established before the waste facilities were sited.⁵³

From the early 1920s through the late 1970s, all five of the city-owned sanitary landfills and six

out of eight of Houston's municipal solid waste incinerators were located in mostly African-American neighborhoods.⁵⁴ The other two incinerator sites were located in a Latino neighborhood and a white neighborhood. One of the oldest waste sites in Houston was located in Freedmen's Town, an African-American neighborhood settled by former slaves in the 1860s. The site has since been built over with a charity hospital and a low-income public housing project.

Private industry took its lead from the siting pattern established by the city government. From 1970 to 1978, three of the four privately owned landfills used to dispose of Houston's garbage were located in mostly African-American neighborhoods. The fourth privately owned landfill, which was sited in 1971, was located in the mostly white Chattwood subdivision. A residential park or "buffer zone" separates the white neighborhood from the landfill. Both government and industry responded to white neighborhood associations and their NIMBY (not in my backyard) organizations by siting LULUs according to the PIBBY (place in blacks' backyards) strategy.⁵⁵

The statistical evidence in *Bean v. Southwestern Waste* overwhelmingly supported the disproportionate impact argument. Overall, 14 of the 17 (82 percent) solid waste facilities used to dispose of Houston's garbage were located in mostly African-American neighborhoods. Considering that Houston's African-American residents comprised only 28 percent of the city's total population, they clearly were forced to bear a disproportionate burden of the city's solid waste facilities.⁵⁶ However, the federal judge ruled against the plaintiffs on the grounds that "purposeful discrimination" was not demonstrated.

Although the Northwood Manor residents lost their lawsuit, they did influence the way the Houston city government and the state of Texas addressed race and waste facility siting. Acting under intense pressure from the African-American community, the Houston city council passed a resolution in 1980 that prohibited city-owned trucks from dumping at the controversial landfill. In 1981, the Houston city council passed an ordinance

restricting the construction of solid waste disposal sites near public facilities such as schools. And the Texas Department of Health updated its requirements of landfill permit applicants to include detailed land-use, economic, and sociodemographic data on areas where they proposed to site landfills. Black Houstonians had sent a clear signal to the Texas Department of Health, the city of Houston, and private disposal companies that they would fight any future attempts to place waste disposal facilities in their neighborhoods.

Since *Bean v. Southwestern Waste*, not a single landfill or incinerator has been sited in an African-American neighborhood in Houston. Not until nearly a decade after that suit did environmental discrimination resurface in the courts. A number of recent cases have challenged siting decisions using the environmental discrimination argument: *East Bibb Twiggs Neighborhood Association v. Macon-Bibb County Planning & Zoning Commission* (1989), *Bordeaux Action Committee v. Metro Government of Nashville* (1990), *R.I.S.E. v. Kay* (1991), and *El Pueblo para El Aire y Agua Limpio v. County of Kings* (1991). Unfortunately, these legal challenges are also confronted with the test of demonstrating "purposeful" discrimination.

Redress Inequities

Disproportionate impacts must be redressed by targeting action and resources. Resources should be spent where environmental and health problems are greatest, as determined by some ranking scheme—but one not limited to risk assessment. EPA already has geographic targeting that involves selecting a physical area, often a naturally defined area such as a watershed; assessing the condition of the natural resources and range of environmental threats, including risks to public health; formulating and implementing integrated, holistic strategies for restoring or protecting living resources and their habitats within that area; and evaluating the progress of those strategies toward their objectives.⁵⁷

Relying solely on proof of a cause-and-effect relationship as defined by traditional epidemiology disguises the exploitative way the polluting

industries have operated in some communities and condones a passive acceptance of the status quo.⁵⁸ Because it is difficult to establish causation, polluting industries have the upper hand. They can always hide behind "science" and demand "proof" that their activities are harmful to humans or the environment.

A 1992 EPA report, *Securing Our Legacy*, described the agency's geographic initiatives as "protecting what we love."⁵⁹ The strategy emphasizes "pollution prevention, multimedia enforcement, research into causes and cures of environmental stress, stopping habitat loss, education, and constituency building."⁶⁰ Examples of geographic initiatives under way include the Chesapeake Bay, Great Lakes, Gulf of Mexico, and Mexican Border programs.

Such targeting should channel resources to the hot spots, communities that are burdened with more than their fair share of environmental problems. For example, EPA's Region VI has developed geographic information system and comparative risk methodologies to evaluate environmental equity concerns in the region. The methodology combines susceptibility factors, such as age, pregnancy, race, income, pre-existing disease, and lifestyle, with chemical release data from the Toxic Release Inventory and monitoring information; state health department vital statistics data; and geographic and demographic data—especially from areas around hazardous waste sites—for its regional equity assessment.

Region VI's 1992 Gulf Coast Toxics Initiatives project is an outgrowth of its equity assessment. The project targets facilities on the Texas and Louisiana coast, a "sensitive . . . ecoregion where most of the releases in the five-state region occur."⁶¹ Inspectors will spend 38 percent of their time in this "multimedia enforcement effort."⁶² It is not clear how this percentage was determined, but, for the project to move beyond the "first-step" phase and begin addressing real inequities, most of its resources (not just inspectors) must be channeled to the areas where most of the problems occur.

A 1993 EPA study of Toxic Release Inventory data from Louisiana's petrochemical corridor found that "populations within two miles of facilities

releasing 90% of total industrial corridor air releases feature a higher proportion of minorities than the state average; facilities releasing 88% have a higher proportion than the Industrial Corridor parishes' average."⁶³

To no one's surprise, communities in Corpus Christi, neighborhoods that run along the Houston Ship Channel and petrochemical corridor, and many unincorporated communities along the 85-mile stretch of the Mississippi River from Baton Rouge to New Orleans ranked at or near the top in terms of pollution discharges in EPA Region VI's Gulf Coast Toxics Initiatives equity assessment. It is very likely that similar rankings would be achieved using the environmental justice framework. However, the question that remains is one of resource allocation—the level of resources that Region VI will channel into solving the pollution problem in communities that have a disproportionately large share of poor people, working-class people, and people of color.

Health concerns raised by Louisiana's residents and grassroots activists in such communities as Alsen, St. Gabriel, Geismer, Morrisonville, and Lions—all of which are located in close proximity to polluting industries—have not been adequately addressed by local parish supervisors, state environmental and health officials, or the federal and regional offices of EPA.⁶⁴

A few contaminated African-American communities in southeast Louisiana have been bought out or are in the process of being bought out by industries under their "good neighbor" programs. Moving people away from the health threat is only a partial solution, however, as long as damage to the environment continues. For example, Dow Chemical, the state's largest chemical plant, is buying out residents of mostly African-American Morrisonville.⁶⁵ The communities of Sun Rise and Reveilletown, which were founded by freed slaves, have already been bought out.

Many of the community buyout settlements are sealed. The secret nature of the agreements limits public scrutiny, community comparisons, and disclosure of harm or potential harm. Few of the recent settlement agreements allow for health

monitoring or surveillance of affected residents once they are dispersed.⁶⁶ Some settlements have even required the "victims" to sign waivers that preclude them from bringing any further lawsuits against the polluting industry.

A FRAMEWORK FOR ENVIRONMENTAL JUSTICE

The solution to unequal protection lies in the realm of environmental justice for all people. No community—rich or poor, black or white—should be allowed to become a "sacrifice zone." The lessons from the civil rights struggles around housing, employment, education, and public accommodations over the past four decades suggest that environmental justice requires a legislative foundation. It is not enough to demonstrate the existence of unjust and unfair conditions; the practices that cause the conditions must be made illegal.

The five principles already described—the right to protection, prevention of harm, shifting the burden of proof, obviating proof of intent to discriminate, and targeting resources to redress inequities—constitute a framework for environmental justice. The framework incorporates a legislative strategy, modeled after landmark civil rights mandates, that would make environmental discrimination illegal and costly.

Although enforcing current laws in a nondiscriminatory way would help, a new legislative initiative is needed. Unequal protection must be attacked via a federal "fair environmental protection act" that redefines protection as a right rather than a privilege. Legislative initiatives must also be directed at states because many of the decisions and problems lie with state actions.

Noxious facility siting and cleanup decisions involve very little science and a lot of politics. Institutional discrimination exists in every social arena, including environmental decisionmaking. Burdens and benefits are not randomly distributed. Reliance solely on "objective" science for environmental decisionmaking—in a world shaped largely by power politics and special interests—often masks

institutional racism. For example, the assignment of "acceptable" risk and use of "averages" often result from value judgments that serve to legitimate existing inequities. A national environmental justice framework that incorporates the five principles presented above is needed to begin addressing environmental inequities that result from procedural, geographic, and societal imbalances.

The antidiscrimination and enforcement measures called for here are no more regressive than the initiatives undertaken to eliminate slavery and segregation in the United States. Opponents argued at

the time that such actions would hurt the slaves by creating unemployment and destroying black institutions, such as businesses and schools. Similar arguments were made in opposition to sanctions against the racist system of apartheid in South Africa. But people of color who live in environmental sacrifice zones"—from migrant farm workers who are exposed to deadly pesticides to the parents of inner-city children threatened by lead poisoning—will welcome any new approaches that will reduce environmental disparities and eliminate the threats to their families' health.

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STUDY QUESTIONS

1. Bullard argues that "unequal environmental protection undermines three basic types of equity: procedural, geographic, and social." Discuss each of these.
2. Bullard advocates the adoption of five principles to increase (or ensure) environmental justice. Discuss three of them in depth.
3. Discuss the following question: Is the disproportionate distribution of pollutants due more to racial discrimination or to economic class inequalities?