

# FOCUS

## Environmental Equity: A New Coalition for Justice

A widening spectrum of the nation's diverse peoples believe that a healthy environment is a basic right of all of earth's inhabitants regardless of race, income, or social background. The new voices in the environmental movement include African Americans, Hispanic Americans, and Native Americans, minorities in the population of the United States, who are asking questions about the environment and their health, many of which appear to have no ready answers. In the emerging discussions, the terms "environmental equity," "environmental justice," and "environmental racism" refer to different but overlapping elements and are increasingly used to define and address facets of environmental health issues.

*Environmental racism* refers to the historical pattern of discrimination against people of color in the United States. Not only does this discrimination limit housing choices and job opportunities for many citizens, it carries over into decisions made at the local level. For example, some of those decisions allow less desirable land uses, today referred to as LULUs (locally unwanted land uses) in and near neighborhoods without political power. These neighborhoods often consist of minorities and the poor. According to activists, that kind of discrimination, with its environmentally malignant baggage, continues in many communities around the country.

*Environmental equity* refers to the perceived unequal burden borne by minorities and the poor in terms of where municipal landfills, incinerators, hazardous waste sites, and industries producing toxic emissions are located. It also refers to diminished civic benefits such as paved streets, efficient sewer systems, and treated water connections. Lack of services in minority and poor neighborhoods is often linked to persisting racism and its consequences. Race and socioeconomic status are also linked in some studies to chronic exposures to greater than acceptable levels of environmental pollution.

*Environmental justice* refers to environmental regulation, environmental law enforcement, and environmental cleanup programs, including those in the workplace. Those active in the environmental justice movement maintain that communities where racial and ethnic minorities are a majority of the population get less attention when it comes to enforcing environmental

laws and are at the end of the list in programs to clean up hazardous sites that threaten community health and well-being. Part of the problem, activists and some government officials agree, is the absence of racial and ethnic diversity in the government offices where policies and practical decisions are made. In many communities, minorities are also missing from local governments that decide these matters.

People working on environmental justice issues are attacking the problems through at least three routes: congressional legislation, executive order, and uniform enforcement of existing laws. Meanwhile, optimism is growing that the opportunity exists to bring together those concerned with equity. There has been very little cooperation among federal agencies in the past, according to some. The view is that agencies need to involve grass-roots organizations in affected communities in designing, developing, and carrying out prevention and remediation policies. Reaching the minority community means linking to churches and schools, and, activists say, agencies need to build working relations with the vulnerable populations through such community institutions.

### Early Awareness

Awareness of the environmental justice movement is generally dated to the 1982 demonstrations by residents of Warren County, North Carolina. These citizens objected to the state's choice of their rural, poor, largely African-American county for a hazardous waste site for polychlorinated biphenyls (PCBs). County citizens were joined in protests by mainstream, historically white environmental organizations and by civil rights leader Benjamin Chavis, now executive director of the National Association for the Advancement of Colored People.

The next widely recognized milestone for the movement was the 1987 publication of *Toxic Waste and Race in the United States: A National Report on the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites*. That study by the United Church of Christ's Commission for Racial Justice looked at racial and socioeconomic characteristics of Americans living in residential areas around commercial hazardous waste sites and near uncontrolled toxic waste sites (often abandoned production operations or unregulat-

ed dumps). Race, described as the minority percentage of the population, was the strongest predictor of location for commercial hazardous waste activity.

The commission's study found that three out of every five African-Americans and Hispanic Americans live in communities with uncontrolled toxic waste sites: a total of more than 15 million African-Americans and 8 million Hispanic Americans. Another 700,000 Native Americans and 2 million Asian and Pacific Islanders were estimated to be living in communities with uncontrolled toxic waste sites. The study expanded on data originally gathered by the General Accounting Office for the southeastern United States and broadened the base by looking at the census data for similar sites in other parts of the country.

### Legal Headway

In response to studies such as the United Church of Christ's and a growing tide of public sentiment and activism, some of the nation's leaders are taking the reins to remedy environmental inequities. Says Robert Bullard of the University of California-Riverside, "It should not be hard to be on board for this. Where there are people, there have been priorities. [The] question is why some people and areas were under-protected, and some laws underenforced. It says some populations are less valuable."

Echoing this analysis, the proposed Environmental Justice Act of 1993 may shift the terms of the debate from those of the early ecology movement to those used by the civil rights movement. This legislation has been introduced in the House of Representatives by Congressman John Lewis (D-Georgia), with 25 co-sponsors, and in the senate by Senator Max Baucus (D-Montana) and co-sponsors Carol Moseley-Braun (D-Illinois) and Ben Nighthorse Campbell (D-Colorado). The bills identically state their purpose as "to establish a program to ensure nondiscriminatory compliance with environmental, health, and safety laws and to ensure equal protection of the public health."

Both versions of the legislation mandate data collection for emissions, demographic details, and human health status, identification of 100 geographic locations (counties or smaller geographic units such as neighborhoods) most heavily affected by toxic and hazardous wastes, and efforts to determine whether the emissions and health status of residents are linked. The bills also ask the responsible federal agencies to identify exposure thresholds for health effects.

The lists of federal offices named in the two bills are not identical, but support the description of the environmental justice movement repeated by Robert L. Knox, deputy director of EPA's Office of Environmental Equity, in the *Journal of Environmental Health*, as the "merger of the environmental and civil rights movements."

The legislation, said Charles Lee, director of the Toxic Waste and Race Study and now head of the United Church of Christ's Commission for Racial Justice, "puts the focus on public health and environmental pollution." Said Lee, "In the laws that existed before this, we had a lot of regulation of one toxic in a single medium. This starts to approach multimedia multi-pollutants, a big factor in communities of color. By reviewing all of the communities in the country, we'll see where the worst problems are."

Many existing regulatory and enforcement programs need to be targeted by the environmental justice movement so that resources can be funneled where there are disproportionate impacts, Lee added. The nation has "no long history of considering public health and environmental impacts" as a pair, and an awareness of their links came about not much before the creation of the EPA, he said. Speaking of the commission's efforts, Lee said, "We looked at race and class versus distribution of environmental impacts. Race was the more significant factor. Economic class was also important. There are issues of race, and then of racism itself."

"We're not saying pollution is okay if it's not in a community of color. We advocate justice for all. Pollution prevention is the ultimate goal. When we speak of environmental justice, this legislation will not solve it all. It will put statutory teeth around environmental justice. It will make sure the data are being gathered," Lee said.

Social scientists and biomedical scientists, including epidemiologists, are trying to document the nature and extent of the disparities reported in the United Church of Christ study. They are looking for data to answer the question of whether minorities are bearing a disproportionate share of the environmental impacts on health

and quality of life of the nation's waste management practices, particularly for toxic and hazardous wastes. "The data that exist are sorely lacking in many ways," Bullard said. "What we have now is not very good data on emissions, lousy data on exposures, even lousier data on health impacts. The environmental justice bills will address data gaps that need to be plugged."

United Church of Christ



**Charles Lee**—Environmental justice legislation will put statutory teeth in the movement's efforts.

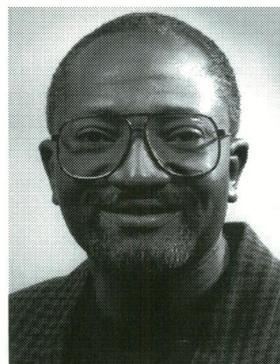
The major flaw in the current environmental justice legislation is that it doesn't go far enough, Bullard says. At the same time, he added, "it's a foot in the door, and that's the nature of Congress." Concurrently, the House and Senate bills elevating EPA to cabinet status both have a provision to establish an office of environmental justice within EPA.

### New Approaches to Old Problems

Bullard, a professor of sociology and a leading chronicler, advocate, and analyst of the environmental justice movement, became a nationally recognized figure in environmental justice discussions with the publication of his 1990 study, *Dumping in Dixie: Race, Class, and Environmental Quality*. One block to understanding equity problems, Bullard argues, "is the general assumption by the media and [public] agencies that all are impacted equally by emissions. Many communities are overlooked."

Because race is the dominant association for discrimination in enforcement of environmental controls, changing the way the nation addresses its environmental problems is appropriately a political and economic debate. Disease prevention and pollution prevention go together, according to Bullard. "We have to recognize it is a political and economic debate. Environmental inequities, elitism, and racism are a package," he said.

UC-Riverside



**Robert Bullard**—The basic question is why environmental racism exists.

Bullard contends that environmental inequities should be addressed across agencies—EPA, HUD, the Department of Health and Human Services, and others—by focusing on the disease prevention/pollution

prevention strategy. The work also needs multidisciplinary approaches in the social sciences, the biomedical, and ecological sciences to address the issues and questions of environmental equity. Scientists need to be talking to each other.

Bullard believes that economics are a secondary consideration in unequal protection from environmental insults, though he says racism and economics are interrelated. "We could eliminate environmental problems and still have differences," he noted. "There is discrimination in what questions are asked and in who does the studies."

One scientist involved in Bullard's study is Rae Zimmerman, professor of planning and public administration in the Robert F. Wagner Graduate School of Public Service at New York University. Zimmerman is applying environmental epidemiology and risk analysis to the question of whether health varies by race.

The first thing to remember, Zimmerman says, is that statistical analyses like those in her studies generate associations,



**Rae Zimmerman**—Communities want to be involved in the process and the solutions.

not definitive cause-and-effect findings. In a paper scheduled for publication later this year in the journal *Risk Analysis*, Zimmerman examines questions of social equity and environmental risk at Superfund sites across the nation. The study builds on earlier work supported by a grant from EPA's Office of Solid Waste and Emergency Response. Past studies have asked similar questions at the county level. Zimmerman looked at municipalities to see whether there were identifiable differences in exposure levels by race, ethnicity, and income.

While there is much work still to be done, especially at the census-block level (the basic data-gathering unit of the Census), some information consistent with almost all previous studies has emerged from the analyses, Zimmerman said. Studies indicate that a slightly higher percentage of blacks than the national average live in communities with National Priority List sites (sites designated for cleanup under the Superfund law): 18% blacks in NPL site communities versus 12% blacks in the national population. At the same time, the study found no association between poverty and residence near NPL sites.

In examining the issue of equity in enforcement of environmental regulations, Zimmerman has looked at EPA records of decisions (RODs), the official record of

EPA actions covering plans for cleanup of NPL sites. The longer a site has been on the NPL, the more likely it is to have an ROD. At the same time, "communities more likely to have Superfund RODs are less likely to have higher numbers of minorities," she said. The year 1986 appeared to be the watershed. According to Zimmerman, in 1986, the number of sites where more minorities are found increased on the NPL.

Said Zimmerman, "We have to move forward on trying to measure some things. Most of the Superfund site studies . . . are finding trends with race. . . . The real problem with Superfund sites is finding out who's at risk. We haven't been able to use reliable measures of health risk; there are some weak measures. Risk analysis is embedded in the process [of risk identification and risk assessment]."

Zimmerman continued, "A lot of attention should be paid to doing the epidemiology that's needed. We have changing exposures, changing populations. Communities want to do their own monitoring, and at least have some oversight on what's being done. We may have good numbers on community diseases but not on what caused the diseases. It's important to get going to prevent future problems."

### Environmental Equity Case Study

An environmental pollutant that most agree disproportionately affects African-Americans is lead. The assistant administrator of the Agency for Toxic Substances and Disease Registry, Barry L. Johnson, and co-author Sandra L. Coulberson reported in the March 1993 *Annals of Epidemiology* that 46 % of the 3-4 million American children ages 6 months to 5 years who were identified in the ATSDR's

1988 report to Congress on childhood lead poisoning as being at risk for lead toxicity were African-Americans. This was a percentage out of proportion to their numbers (2,483,400 or 17.9%) in the total population (13,840,000) in the at-risk age range.

Janet Phoenix, head of the National Lead Information Center, agrees that the poor and minorities bear a disproportionate share of the burden of pollution. Said Phoenix, "Though lead is not a waste so much as a toxin in the environment, I do have a sense that there are differences in health status. The poor tend to have more than one toxin as exposure factors."

Phoenix continued, "In looking at poverty as a factor, the poor are ill equipped to respond aggressively to cleaning up hazards in their own communities. It's also easier to site such operations in poor communities. The residents are often uninformed, and the prospect of employment is dangled before them along with other resources for the community, although these often don't materialize."

The National Lead Information Center that Phoenix directs is funded by four federal agencies: EPA, CDC, HUD, and the Department of Defense. From her perspective of working extensively on lead exposure and health problems, Phoenix noted that there can be unintended consequences and disproportionate impacts of regulation. "Title 10 housing for the elderly is not subject to the same health and safety regulations as other public housing, based on the presumption that nobody under the age of 6 would live there. However, the poor often live together in multigenerational households," she said. Therefore, although the regulations were supposed to lower costs of

housing for the elderly, she said, the unintended consequence was potential exposure of young children to unsafe levels of lead in paint, soil, and dust at some of these units. "At the heart of the matter," Phoenix said, "is the problem of little communication between the poor and the regulators. The regulators are writing . . . regulations based on regulatory perceptions, not community input."

The communications gap persists at the National Lead Information Center. Most of those who call for information are in higher socioeconomic strata than the groups most likely to be at risk of exposure to lead. "The poor tend not to gain much of their information from the written word. They're not sure, if they call, that they'll get the information they need. It makes our service less useful to the highest risk communities. To help bridge some of these gaps, we go out to the high risk communities to try to make the connections one on one," Phoenix said. The center is working on low- and no-literacy materials as well. It has bilingual materials for English and Spanish and is working on materials in Southeast Asian languages.

As Phoenix attends planning and policy meetings around the country, she advocates alternative viewpoints in approaching environmental health problems. Some of her colleagues argue that the disparities are based on race, not economics, but Phoenix believes the demographic data just aren't there, noting "we see similar patterns along the Mexican border and in the Northeast."

### Research Needs

Sensitive and susceptible people may make up an additional population of concern because of the way many of the laws governing EPA activities are written, noted Kenneth Sexton, director of EPA's Office of Health Research. Laws covering EPA activities often include provisions for pollution control that protect the most susceptible. Determining the members of that special group is an emotional and a scientifically challenging task, Sexton said. Overlap with issues of equity, justice, and racism add to the complexities.

In Sexton's office, the concepts and questions incorporated in the term "environmental justice" have become high profile. Sexton said that when the agency tried to look at current research to see how it addressed environmental equity issues, "We found the past research useful but without much focus on equity questions. There was not enough data on socioeconomic factors and ethnicity. We don't need to apologize for the research that had been done, but it's apparent we haven't focused enough on the economic and social aspects."



**Undue burden.** The Massachusetts Childhood Lead Poisoning Prevention Program tests the littlest bearers of the toxic burden.

A major issue in the environmental equity area for EPA is exposure assessment. Sexton observed, "We need to measure and understand which populations are at the high end of the distribution for focal chemicals. There's not adequate information on ethnicity. At the same time, until we understand the general population, there's nothing to compare the subpopulations with. A major hole in environmental health data is the baseline exposure of the general population. It's amazing how little attention has been given to what is an appropriate baseline, and to what exposure data to get."

The EPA has been working on exposure analysis with ATSDR and the National Center for Health Statistics. There has been a workshop to determine what the data needs are, and the EPA has published an inventory of existing federal databases to improve access to information.



**Kenneth Sexton**—A major data gap is the baseline exposure of the general population.

**Human exposures.** The recently formed National Human Exposure Assessment Program is intended to fill some of the human exposure data gaps through studies of a representative sample of the U.S. population. The pilot studies begin in fiscal year 1994 in EPA regions V and IX. The studies will look at a broad group of chemicals, with repeated sampling performed at three-year intervals. The pilot studies will help EPA assess how well the program works, how the field study goes, and how cost effective the program can be, Sexton said. "The approach appears to be feasible. It clearly is essential to asking the needed questions."

**Geographic information systems.** Geographic information systems are being used more and more and may be important in evaluating inequities and disparities in subpopulations. The approach helps regions integrate emissions data and census data, particularly in the case of the Toxics Release Inventory (TRI). EPA is close to finishing a project looking at socioeconomic measures, ethnicity, and demographics at the county level, Sexton said. However, he cautioned, "The TRI is not a good surrogate for exposure. It's the best we have, and it can serve as a direction finder."

**Interagency efforts.** In cooperation with NIEHS and ATSDR, EPA has been looking at research needs associated with questions of environmental equity. A group of papers on public health research needs

## Environmental Outreach

The training of cleanup workers, environmental health professionals, and scientists to pursue research into the links between environment and human health and diversifying the racial, ethnic, and gender mix of potential environmental health professionals and policy makers are becoming new priorities at local and federal government levels. The outreach programs designed to accomplish these goals are as varied as their geography.

In Ann Arbor, Michigan, at the Washtenaw County Environmental Coordinating Office (ECO), Rebecca Head directs an office that has placed the water, solid waste, environmental health, and public works programs under one umbrella to address public service needs and communicate with citizens on environmental issues.

The office is reaching out to the next generation and to the issues raised by the environmental justice movement as well. Part of the approach comes from Head's training as a toxicologist. "Past practice in public health said that if people had bacteria-contaminated water, you removed the people from exposure and then you looked at the source of exposure," Head noted. "Now, in addition to public health policies and toxicological issues and policies, we're asking how these exposures impact communities of color."

Her office has college students serving year-round internships from the University of Michigan. A summer internship for minority high school students exposes them to public service careers and to careers related to environmental health. The high school interns spend time in different agencies under ECO, going with sanitarians on inspections, taking water samples, doing waste sorts to evaluate the waste stream, and writing reports on their findings.

"Part of the interns' education is exposing them to what organizations are there, available for use by the community. They learn about recycling, about alternatives to the old ways of waste handling. The people conducting the program gain a real awareness of the mixture of sophistication and naiveté in these young people. The young people come from areas with recycling, yet there's not the awareness of waste, how one can approach it differently," Head said.

The ECO program is making links with the young people and their communities through churches, block groups, and the like. Workers from the office and the interns go out to groups in the community, and the young people talk about their ECO experiences. In addition, the office has an advisory committee to help shape ECO programs.

The ECO internships are in the second year under an EPA Environmental Education grant. "I'm not sure how we'll fund the program next year, but we'll find a way," Head said. "We want to make links within the community. It's important that we as public employees remember who our customers are. Sometimes we lose sight of who we serve. Also, government has to show what it's doing, what the people are getting for their tax dollars. People are just not going to pay for things any more unless they think they're worth it. With these high school students of color, we're reaching out to the communities."

Developing future environmental health professionals is a long-term commitment and a challenge for Marian Johnson-Thompson, director of the Office of Institutional Development at NIEHS in North Carolina.

In addition to her responsibilities of encouraging and broadening access to professional development within the institute, Johnson-Thompson is developing a kindergarten through 12th grade program that will expose children early and often to the excitement, problems, and opportunities in environmental health sciences.

Said Johnson-Thompson, "We must expose the kids to the environmental health sciences at a very early age. Statistics show that children's early abilities are quite alike. We need to continue nurturing those abilities rather than letting expectations cut off further development. We need to educate the parent to be involved, as in the family math program. We have to overcome the cultural bias in some quarters about not doing 'white man's work.' We must make everybody literate so we can reach them. It's a long-term . . . investment if we are to get a representative mix—representative of the nation's people—at decision-making levels."

Diversity in the makeup of those doing research, setting policy, and working on environmental health issues will make a difference. "As we saw in the women's health initiative at NIH, once we had women trained in the relevant fields, they gained respect, could raise the issues that had not been addressed, and had the motivation and perspective that had been missing," Johnson-Thompson said. "If we have trained minorities in decision-making positions, others will listen."

commissioned by the agencies is currently being published. A symposium on public health research needs related to environmental equity is scheduled for 10–12 February 1994, with NIEHS as the lead agency, that will follow-up on the issues as well as raise awareness of the issues, Sexton said.

NIEHS has convened several interagency meetings to improve communication and cooperation among the agencies in a number of environmental research areas, and the expansion to the area of environmental equity was a natural progression. The institute has invited grass-roots leaders and social scientists to join the biomedical scientists and agency policy makers in a symposium on the concepts, research challenges, and disease prevention and health promotion opportunities embodied in the concepts of environmental equity and justice.

In one of EPA's newest offices, the Office of Environmental Equity, the staff is coordinating equity efforts between headquarters and regions. In addition, said the office's deputy director, Robert J. Knox, "There is a broad-based commitment by the [EPA] administrator and the [Clinton] administration to incorporate environmental

equity considerations across the agency's activities." Along with its internal role, the office is overseeing the EPA's Minority Academic Institutions Program, part of the broad government effort to increase the numbers of minorities entering science and engineering.

The Agency for Toxic Substances and Disease Registry is one federal office that has been in the trenches gathering data specifically on who is exposed to toxics from known hazardous sites for about five years. At ATSDR, Barry Johnson and his colleagues have been asking questions about the distribution of environmental toxics and hazardous exposures by race since 1987. Currently, ATSDR is 15 months into planning for its Delta Project, which will look at the relationship between environmental hazards and the health of minority populations in a 214-county swath through 7 states along the Mississippi River, in cooperation with local communities and institutions.

*The Delta Project.* The Delta Project is expected to work through the Historically Black Colleges and Universities (HBCUs) in the region, beginning its information base with data that state and

local health departments have compiled on environmental health problems.

There are a number of goals for the project, Johnson said. "We plan to start with a needs assessment. We don't want to just come in and say, 'You've got another problem.' We hope to sort out what can be done across federal agencies. The question arises of how to involve the communities. These people pay our salaries, and their communities must be involved in the study effort."

That's one of the roles for the HBCUs, which may serve as community voices. The capacity of the schools to contribute to the studies will be identified, and the agency will seek to build a network of local support, working in phases, with the focus on problems, with opportunities for redress that can go directly to the community, Johnson said. "The legislation now in Congress, with its concept of acquiring, dedicating, and focusing some effort on improving information on minorities and environmental health, is a meritorious approach," Johnson said.

ATSDR has looked at issues of lead in children, location of people around haz-

### Making Plans to Find Solutions

A recent planning meeting to address the need for additional health research to cure the ills of environmental inequities brought together 43 professionals representing U.S. government agencies, hospitals, colleges, universities, ecumenical and community groups, as well as physicians, lawyers, and educators, to discuss a subject that they believe will be the next environmental battleground.

Sponsors of the symposium were the NIEHS, U.S. EPA, Agency for Toxic Substances and Disease Registry, Department of Energy (represented by Argonne National Laboratory), and the National Institute for Occupational Safety and Health.

"There is a sense of renewal in our coming together," Jerry Poje, a toxicologist with NIEHS, said to meeting participants. "There are issues here that have far too long been dormant."

Health care, housing, lead poisoning, training of minorities for environmental management positions, environmental health education for grades kindergarten through 12, asthma, the lack of training of doctors in the prevention of occupational diseases, and health care rights for all were some of the topics discussed.

"Time is of the essence in doing active work in health equity," Poje said. He added that new directives from the White House addressing environmental justice and President Clinton's plan to hold a national summit on environmental issues dictate that government agencies come together to establish goals in eliminating environmental inequity.

The two-day planning symposium held at Argonne National Laboratories in Illinois was a hands-on meeting that laid the foundation for a national conference scheduled for 10–12 February 1994 in Washington, DC. About 500–700 people active and interested in environmental equity issues will attend.

A common question raised during the meeting was whether the agencies were tackling issues that are too broad. "Will there be a backlash in our efforts to make changes?" asked Charles Lee of the United Church of Christ's Commission for Racial Justice.

Bunyan Bryant of the University of Michigan's School of Natural Resources emphasized to the participants the importance of the meeting. "If we put ourselves together, we can put our communities together. And, if we put our neighborhoods together, we can put our world together," he said.

Bryant, who authored the book, "Race and the Incidents of Environmental Discourse: The Time of Discussion" believes that the environmental justice movement has the potential to make the regulatory agencies embrace the policy of pollution prevention rather than pollution control.

Bryant said, "There needs to be agency and interagency cooperation. If this is done successfully, there is a good chance that researchers and agencies will work together to look at new research paradigms."

A major portion of the conference was devoted to workshop participation where group members discussed topics that will be addressed at the February conference.

At that conference five workshops will address environmental health research needs; environmental health education and training; environmental outreach, accessibility, and accountability; institutional mandates and interagency cooperation; and environmental health prevention and intervention strategies.

A recurring theme throughout the symposium was the agreement among participants that there needs to be health equity among all socioeconomic groups and that environmental factors that contribute to disparity must be identified and remedied.

Pamela Johnson

ardous waste sites, and effects of pesticides on minority workers. It has some information that needs expanding: data that support the conclusion that people who live around waste sites are minorities. The work recommended in the Commission on Racial Justice report needs to be done, Johnson added. To date, ATSDR has found that 2% of evaluated hazardous waste sites present "no public health hazard"; 2% present an "imminent and urgent public health hazard"; 40% have human exposures to releases from the sites; and 40% have potential exposure sources.

Johnson described another collaborative effort by ATSDR on environmental equity. "As a federal agency," Johnson said, "we have done a fair amount of looking at toxins and their effect on Native Americans. The matter of fish consumption with a lot of contaminated waterways means too much consumption can lead to health problems. At the same time, we want to be respectful of native customs and cultures. We also have to be aware of the subsistence aspect . . . we cannot be insensitive. We've had a lot of consultation with the Indian Health Service, and the IHS could not be more cooperative."

A request from the Navajo Nation's Superfund Program Office led to a successful outcome. The Navajo office asked EPA for help in determining whether uranium mine tailings on Navajo land might be a health hazard. EPA's regional office asked ATSDR to take a look, Johnson said.

Uranium mine tailings consist of uranium ore with uranium levels below a certain level required for extraction. The Navajos had used some of the tailings for building material and some for decoration around buildings. ATSDR found radiation levels "of health concern." The agency wrote a health advisory, a major Public Health Service statement, that went to EPA. A health advisory can put a waste site on the NPL with a high hazard ranking system score, the usual route to the NPL. EPA got the ore out of the area and out of houses and removed the decorative stones. Within six to eight months from the initial inquiry, the hazard had been removed.

"The biggest challenge for public health is awareness creation . . . in the scientific and public health communities," Johnson said. "Residents of the affected communities are aware there are problems that are the products of poverty and disenfranchisement, of the communities not being part of the decision-making process.

**Diversity.** Johnson described an important aspect of the environmental equity and justice equation that concerns who is involved in forming solutions to these problems. Said Johnson, "Another challenge for public agencies is that we must

look like the public we serve. Otherwise, there's no credibility. Public sector agencies have to work to make themselves and their staffs diverse. We need to support the schools that are producing the [minority health] professionals. . . . The government has to commit the resources and stay the course."

Lee, the Commission for Racial Justice director, expounded on the concept of diversity, saying, "part of the problem has been the limited background, the absence of diversity among those who enforce environmental laws. It's no big surprise that they haven't asked the right questions." The matter had not been considered a real issue by the communities of color, he added.

The recent elevation of Benjamin Chavis, who participated in the Warren County protests, to head the NAACP brings environmental justice to the forefront of social justice issues, Lee said. It also makes sense that training and jobs in environmental cleanup should be part of the environmental justice package, he continued, adding, "The issue cuts across a number of levels."

The United Church of Christ Commission has been associated with two landmark national events related to environmental justice: the preparation and publication of *Toxic Wastes and Race*, and the first National Conference of People of Color on the Environment, held in October 1991.

According to Lee, "The conference was an exercise in leadership on the environment. . . . The people who will make a difference are the grass-roots leaders. The conference was to be a platform for these grass-roots leaders to have national visibility. My hope is that it will eventually be as significant as the first Earth Day. The conference meant a redefinition of the concept of environmentalism; it was a refocusing. We have a lot to learn from the indigenous peoples about harmonious and beneficial use of our environment."

Lee outlined where he believed environmental justice and equity efforts should focus next. "First, we must put environmental health in the centerpiece of the environmental movement. The [Environmental Justice] Act is part of that direction. Second, environmental cleanup is a source of jobs in a period when jobs are being lost and especially in urban areas where it could mean making jobs that pay a living wage. The third area is understanding and reshaping the way decisions about environmental issues are being made. We need to use local experts, people who have lived with the problem, in making difficult

choices about remediation of hazardous sites."

There is no question that real and substantial efforts are under way to broaden access to the process and procedures that accompany official environmental protection in the United States. Efforts by federal offices to include more of the citizens who are directly affected by environmental regulatory decisions and community representatives in making the decisions that affect their daily lives are likely to go through some birthing pangs. A key to smooth progress will be how well both sides listen to what the other is saying. Groundwork for listening, sharing a common vocabulary for the discussions, is being laid in meetings like the one planned by NIEHS in February. As sociologists and scientists sort through their mutually exclusive jargons, it is likely that the grass-roots leaders mentioned by Lee and Bullard will have to keep the academics' eyes on the prize: a safe and healthy environment for every citizen, based on sound information, good science, and fair laws that are enforced equitably.

Betty Mushak

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