

Environmental Justice: Building a Unified Vision of Health and the Environment

Charles Lee

Office of Environmental Justice, U.S. Environmental Protection Agency, Washington, DC, USA

The assorted and multidimensional concerns that give rise to the issue of environmental justice have proved to be intellectually daunting and highly resistant to positive change. Low-income, people of color, and tribal communities confronting environmental stressors are beset by stressors in both the physical and social environments. For this reason, while the bifurcation of the public health and environmental fields taking place over the past several decades has yielded generally negative impacts in areas of public health, environment, and planning, the consequences for low-income and disadvantaged communities have been especially grievous. This commentary builds on the recent Institute of Medicine workshop titled “Rebuilding the Unity of Health and the Environment: A New Vision of Environmental Health for the 21st Century.” The workshop organizers posited that only by thinking about environmental health on multiple levels will it be possible to merge various strategies to protect both the environment and health. In this commentary we examine how such a new vision of uniting public health and the environment can contribute to attaining environmental justice for all populations. *Key words:* environmental justice, environmental policy, health disparities, minority health, planning, public health, socioeconomic status, sustainable communities. *Environ Health Perspect* 110(suppl 2):141–144 (2002). <http://ehpnet1.niehs.nih.gov/docs/2002/suppl-2/141-144lee/abstract.html>

The assorted and multidimensional concerns that give rise to the issue of environmental justice have proved to be intellectually daunting and highly resistant to positive change. On one hand, people of color, tribal, and low-income communities often suffer adverse and disproportionate exposure to environmental and occupational toxins. Most of these negative impacts have yet to be documented. However, the emerging literature on this subject has begun to conclusively document serious environmental inequities in the areas of lead poisoning; air pollution and ambient air quality; groundwater contamination and drinking water safety; proximity to noxious facilities, mining waste and nuclear plants; location of municipal landfills, incinerators, and abandoned toxic waste sites; placement of transportation thoroughfares; illegal dumping; occupational health and safety; use of agricultural chemicals; contaminated fish consumption; habitat destruction; cleanup of Superfund sites; and unequal enforcement of environmental laws (1–18).

On the other hand, these populations tend to be more susceptible and vulnerable by virtue of the social environment. Factors such as economic distress and low socioeconomic status (SES) contribute to the impact of these exposures as well as act independently to lower health status. Exposure to toxic environmental and occupational agents can have different effects in individuals differing in age, SES, ethnic background, gender, and genetic composition. Some subsets of the population are inherently more susceptible to cellular or genetic damage for a number of reasons,

including genetic susceptibility, nutritional status, other social or cultural factors, or in the case of children, the vulnerability of developing systems to environmental insult. Distressed communities also suffer from fragmented social fabric and psychosocial and cultural stressors. Although the effects of stress occur individually, cumulatively they may often acquire new dimensions (19–27).

Addressing these concerns will require the articulation of new visions, new strategies, new models, and new partnerships. Environmental justice encompasses many concepts. These range from community-based research to sustainable communities (28–30). More often than not, issues of environmental justice comprise a complex web of public health, environmental, economic, and social concerns. Given the multiple stressors that impact low-income, people of color, and tribal communities, such groups do not have the luxury of addressing one issue at a time. They require holistic, integrative, and unifying strategies that address social, economic, and health improvement simultaneously. For this reason, while the bifurcation of the public health and environmental fields taking place over the past several decades has yielded generally negative impacts in areas of public health, environment, and planning (31,32), the consequences for low-income and disadvantaged communities have been especially grievous.

Institute of Medicine Workshop

On 20–21 June 2000, the Institute of Medicine (IOM) conducted a workshop

titled “Rebuilding the Unity of Health and the Environment: A New Vision of Environmental Health for the 21st Century.” The purpose was to raise awareness, promote community-based environmental health, and mold multidisciplinary partnerships to redefine and improve environmental health. IOM stated:

The goals of environmental health are to maintain a healthy, livable environment for humans and other living species—an environment that promotes well being and a high quality of mental and physical health for its inhabitants. . . . Responsible leadership requires that policy makers, health professionals, industry representatives, and the general public all carry an expanded and enhanced vision of environmental health forward into the 21st century. New approaches towards building environments that actively improve health will be required, including strategies to deal with waste, unhealthy buildings, urban congestion, suburban sprawl, poor housing, poor nutrition, and environmentally related stress.

The workshop brought together a broad group of representatives, including business leaders; economists; architects; urban planners; engineers; public health, environmental, and social scientists; clergy; educators; and citizens to share and discuss their views on the elements for a healthful environment. The workshop organizers posited that only by thinking about environmental health on multiple levels will it be possible to merge various strategies to protect both the environment and health (33).

Environmental Justice

The issues and ideas that gave birth to the IOM workshop are highly consonant with and closely related to the issues and ideas embodied in the concept of environmental justice. The concept of environmental justice has itself undergone significant maturation in the short time that it has existed. In 1979,

This article is part of the monograph *Advancing Environmental Justice through Community-Based Participatory Research*.

Address correspondence to C. Lee, 1200 Pennsylvania Ave. NW, Mail Code 2201-A, Washington, DC 20460 USA. Telephone: (202) 564-2597. Fax: (202) 501-1163. E-mail: lee.charles@epa.gov

The views expressed in this article are solely those of the author. No official support or endorsement by the U.S. Environmental Protection Agency or any other agency of the federal government is intended or should be inferred.

Received 13 August 2001; accepted 11 January 2002.

an African American community in Houston, Texas, filed suit to prevent the siting of a solid waste landfill in *Bean v. Southwestern Waste Management* (34). In 1982, the predominantly African American community in Warren County, North Carolina, protested the siting of a polychlorinated biphenyl (PCB) landfill. This incident brought together the environmental and civil rights communities and sparked national attention. It gave rise to the landmark 1987 United Church of Christ study *Toxic Wastes and Race in the United States* (6). These events provided impetus for the emerging awareness about environmental conditions in low-income, people of color, and tribal communities. A groundswell of activity around a vast array of issues began to take place within such communities, including but not limited to toxics, lead poisoning, housing, land use, air quality, workplace health and safety, economic development, and multi-issue organizing (35).

In little over a decade, what was a loose alliance of community-based activists, church-based civil rights leaders, and academic researchers had transformed into a vibrant social movement that sought to systematically examine and develop proactive strategies to address issues of environmental degradation in people of color, tribal, and poor communities. A systematic public discourse on issues of race and the environment began around issues of the siting of hazardous waste and other noxious facilities. Initially, issues of race and the environment were understood only within the narrow context of the siting issue. This would dramatically change as more people of color communities demanded that the residential, occupational, or other issues they were confronting in their own communities be made part of the discourse on environmental policy. Environmental justice is based upon the idea that the health of the members of a community, both individually and collectively, is a product of physical, social, cultural, and spiritual factors. The impetus for such an integrative view of the health and well-being of a community comes directly from the emerging movement around environmental justice.

Environmental justice represents a new vision borne of a community-driven process in which the core is a transformative public discourse on what constitutes truly healthy, livable, sustainable, and vital communities. It has given birth to a new definition of the environment as “the place where we live, where we work, and where we play” (36). It sees the ecosystem that forms the basis for life and well-being as composed of four interrelated environments, i.e., natural, built, social, and cultural/spiritual (37). It has made

important contributions to the understanding of the profound value of public participation and accountability in formulating public policy and environmental decision making. It has significantly expanded the discourse concerning public health and environmental risks to include issues of multiple, cumulative, and synergistic risk. It has pressed for a new paradigm for conducting community-driven science and holistic, placed-based, systems wide environmental protection. It is searching for concepts and tools that are at the same time holistic, bottom-up, community-based, multi-issue, cross-cutting, interdependent, integrative, and unifying.

Implications

A useful starting point for examining how the issues of environmental justice, public health, and the environment can be addressed in an integrative manner would be a common proactive definition of health. The World Health Organization defines health as “a state of complete physical, mental, and social well being, not merely the absence of disease or infirmity” (31). It further defines a healthy community as one that includes

a clean, safe, high-quality environment and a sustainable ecosystem; the provision of basic needs; an optimum level of appropriate high-quality, accessible health and sick-care services; and a diverse, vital economy. (33)

Although often quoted, the vision embodied in this definition is not easily attained. At the IOM workshop, Bullard emphasized that health is more than the absence of disease and that environmental justice must be the starting point for achieving healthy people, homes, and communities. In addition, we must work beyond false dichotomies such as jobs versus the environment or jobs versus health (33). Rather than dwell on such dichotomies, we must strive to identify the synergies between various issues. For example, the issues of environmental justice will provide challenges for public health and environmental health professions and stimulate practitioners to think more integratively. Moreover, the holistic unifying paradigm articulated at the IOM workshop provides a context through which public and environmental health practitioners can apply the tools of their professions in the service of such communities.

A significant attempt in recent years to begin creating a proper context for the greater utilization of the tools of public health and environmental practitioners is the work of the Interagency Working Group on Environmental Justice (IWG), which was established under Executive Order 12898 on environmental justice (38). Through its

Integrated Environmental Justice Action Agenda, the IWG seeks to nurture and promote collaborative models for achieving environmental justice. The Action Agenda attempts to target and focus the varied resources of federal agencies in conjunction with local partnerships to address community-based environmental, health, and livability concerns (39).

The centerpiece of the Environmental Justice Action Agenda includes 15 environmental justice demonstration projects in diverse urban, rural, and tribal communities in virtually all regions of the nation, including Puerto Rico and Alaska. These demonstration projects are intended to a) promote federal support of solutions that begin in the community and remain in the community; b) link federal, state, tribal, and local government with comprehensive community-based planning processes; c) seek collaboration and integration so that resources can be better targeted and leveraged; d) develop a template for holistic local solutions to environmental justice issues; and e) serve as a platform for advocating innovation in government (40).

Both the unifying vision and the specific ideas articulated at the IOM workshop hold potentially enormous promise for distressed communities. As communities engage in comprehensive planning processes to articulate a vision of their future, they would benefit immensely from the intellectually creative, imaginative, and vibrant ideas presented by farsighted participants in the dialogue to build this new vision of environmental health for the twenty-first century. The following five communities provide some good examples of how the natural, built, and social environments interface with each other. They also provide some examples of how land-use planning, housing, pollution prevention, use of new technologies, and community capacity building are being applied in the context of holistic vision of comprehensive community revitalization.

Linking environmental cleanup, economic revitalization, and holistic community planning in a way that builds community capacity and combats urban sprawl is an exciting challenge. The mantra of Bethel New Life, a renowned faith-based community development corporation in the African American West Garfield section of Chicago, Illinois, is captured in the following phrase: “Turning environmental liabilities into community assets and opportunities” (41). Bethel New Life is designing and building a mixed-use development that takes advantage of existing rail links and converts an abandoned industrial area into a revitalized economic center to provide much-needed housing, jobs, and commercial and industrial development. This is an on-the-ground

example of how many of the elements that make up a new vision of health and environment can be applied.

Re-Genesis, a community-based organization in the Arkwright and Forest Park sections of Spartanburg, South Carolina, is spearheading the building of a broad-based partnership of community groups, local government, business and industry, faith groups, universities, and federal agencies to clean up and revitalize a depressed, contaminated community. A predominantly African American community lives within a quarter mile of two Superfund sites and close to an abandoned textile mill, an operating chemical plant, two waste disposal sites, and several suspected illegal dumps. Through a community-based planning process, residents have developed a vision of revitalization for the community. Envisioned are new housing, technology and job training centers, and a health clinic. Another feature of this vision is a “greenway,” a feature the state health officer encouraged as a prescription to promote wellness and exercise and to combat obesity.

Addressing transportation-related pollution in overburdened poor urban environments has more often than not resulted in inaction. However, this has not been the case for the New York City Alternative Fuels Summit, a project that grew out of a set of commitments made by federal agencies during the 6 March 1999 Local Environmental Justice Listening Session led by the White House Council on Environmental Quality (42). The project is built around a process whereby community-based organizations identify vehicular fleets operating in communities with poor air quality and high rates of respiratory illness and are good candidates for conversion to clean-fuel vehicles. One recent breakthrough was the commitment of \$1.93 million by the U.S. Postal Service for the purchase of 55 electric and natural gas vehicles for use in the South Bronx and similar neighborhoods.

Barrio Logan is a low-income Latino community in San Diego, California, plagued by substandard housing, overcrowded schools, lack of adequate healthcare and social services, and high unemployment rates. Criss-crossed by two major highways, this community is subject to release of three million pounds of toxic air pollution each year from numerous small industries, large shipyards, naval installations, and waste storage facilities. A partnership that involves the Environmental Health Coalition, California Air Resources Board, City of San Diego, University of Southern California, federal agencies, and others is seeking to reduce exposure of residents to air pollution, reduce incompatible land uses, and improve children’s health by improving the ambient

environment. Facilitation and conflict resolution have been important elements in building this partnership.

The Metlakatla Indian Community Master Plan seeks to clean up contamination of the Annette Island Indian Reserve in southeastern Alaska and plan redevelopment to promote economic growth through tourism and commercial fishing. Federal agencies made a commitment to work in partnership with the Metlakatla to address contamination issues that have resulted from the construction and operation of defense facilities over the past five decades. Extensive soil contamination has occurred around fuel storage sites. In addition, lead, asbestos and oils containing PCBs have been found. Especially pertinent to attempts to properly address the issues of Native Americans and Alaska Natives are issues such as the proper implementation of federal trust responsibilities and the building of tribal capacity to manage and conduct environmental programs. The Metlakatla has also been designated a national Brownfields Showcase Community.

Challenges

The above communities are a few of the many examples where the vision articulated at the IOM workshop “Rebuilding the Unity of Health and the Environment” can be usefully applied. Environmental justice issues necessarily involve the interplay of the natural, built, and social environments. To date, these communities suffer from the lack of a well-articulated paradigm and a context for effectively leveraging much-needed public health, environmental, planning, and other tools. Many challenges must be overcome for the IWG environmental justice collaborative model to contribute significantly to achieving this unifying vision. Long-term, these challenges include the need to educate the nation’s leaders about the goal of environmental justice that is already embedded within the nation’s long-standing environmental, public health, transportation, housing, and other statutes. Short-term, three strategies require immediate concerted attention:

- Foster capacity-building within affected communities so they can strategically form partnerships and proactively access, utilize, and leverage the resources of government and other institutions. Capacity-building activities range from training and technical assistance to the use of facilitation and consensus building, where appropriate. The vision of environmental justice is rooted in the philosophy that solutions must rely on community-based participatory efforts.
- Promote a national dialogue on achieving collaborative models to achieve environmental justice. The ultimate goal is for

these environmental justice collaborative models to be integrated into the normal conduct of business. Such a goal will require understanding and “buy-in” to the collaborative model on the part of all sectors of society, who in turn must advocate for greater commitment to such efforts on the part of government and other institutions.

- Identify elements of success of a collaborative model and ways to measure them. For environmental justice collaborative models to reach their full potential as a significant tool for achieving healthy communities, a template for conducting successful environmental justice collaborations must be developed and tested. The elements of such a template include but are not limited to the following: partnerships and transparent relationships among all parties, intergovernmental coordination, meaningful community involvement, recognition of community expertise, cultural considerations, and availability of resources. Once the elements of success are identified, an even greater challenge will be the evaluation and measurement of success. These will have to address, among other things, process design, institutional and culture change, and improvement in quality of life. Although these questions are complex in and of themselves, they become exponentially more difficult when we have to factor in the differing perspectives of sometimes adversarial parties.

These three strategies are critical for environmental justice collaborative models to progress beyond being merely good ideas. Farsighted public health and environmental practitioners can play a critical role in nurturing and promoting a unifying vision of health and the environment within communities where such a new paradigm will make the most meaningful difference.

REFERENCES AND NOTES

1. Landrigan PJ, Gehlbach SH, Rosenblum BF, Shoultz JM, Candelaria RM, Barthel WF, Liddle JA, Smrek AL, Staehling NW, Sanders JF. Epidemic lead absorption near an ore smelter. *N Engl J Med* 292(3):123–129 (1975).
2. Davis ME. The Impact of Workplace Health and Safety on Black Workers: Assessment and Prognosis. *Labor Stud J* 4:29–40 (1981).
3. Bullard RD. Solid Waste Sites in the Black Houston Community. *Sociolog Inq* 53:273–288 (1983).
4. U.S. Department of Health and Human Services. Report of the Secretary’s Task Force on Black and Minority Health. Washington, DC:DHHS, 1985.
5. Wasserstrom RF, Wiles R. Field Duty, U.S. Farm Workers and Pesticide Safety. Washington, DC:World Resources Institute, 1985.
6. United Church of Christ Commission for Racial Justice. Toxic Wastes and Race in the United States: A National Study on the Racial and Socio-Economic Characteristics of Communities Surrounding Hazardous Waste Sites. New York:United Church of Christ, 1987.
7. ATSDR. The Nature and Extent of Lead Poisoning in Children in the United States. Atlanta, GA:Agency for Toxic Substances and Disease Registry, 1988.

8. Moses M. Pesticide related health problems in farm workers. *Am Assoc Occup Health Nurses J* 37:115–130 (1989).
9. Weiss KB, Wagener DK. Changing patterns of asthma mortality: identifying target populations at high risk. *J Am Med Assoc* 264(13):1683–1687 (1990).
10. Bullard RD. *Dumping in Dixie: Race, Class, and Environmental Equity*. Boulder, CO:Westview Press, 1990.
11. U.S. EPA. *Environmental Equity: Reducing Risk for All Communities*. Report to the Administrator. EPA230-R-92-008. Washington, DC:U.S. Environmental Protection Agency, 1992.
12. West PC, Fly F, Marans R. Minority anglers and toxic fish consumption: evidence from a state-wide survey of Michigan. In: *Race and the Incidence of Environmental Hazards: A Time for Discourse* (Bunyan B, Mohai P, eds). Boulder, CO:Westview Press, 1992.
13. Lavelle M, Coyle M. Unequal Protection: The Racial Divide in Environmental Protection. *Nat Law J (Special Issue)* 15(3) (1992).
14. Louisiana Advisory Committee to the U.S. Civil Rights Commission. *The Battle for Environmental Justice in Louisiana: Government, Industry and the Public*. Kansas City, MO:U.S. Civil Rights Commission Regional Office, September, 1993.
15. Sexton K, Anderson YB, eds. *Equity in Environmental Health: Research Issues and Needs*. *Toxicol Ind Health (Special Issue)*:9(5):679–977 (1993).
16. Wernette DR, Nieves LA. Breathing polluted air. *EPA J* 18:16–17 (1992).
17. Friedman JG. Achieving environmental justice: the role of occupational health. *Fordham Urban Law J* 21(3):605–631 (1994).
18. O'Neill CA. Variable Justice: Environmental standards, contaminated fish, and 'acceptable' risk to native peoples. *Stanford Environ Law J* 19(1):1–118 (2000).
19. Jaynes GD, Williams RM Jr. *A Common Destiny: Blacks and American Society*. Washington, DC:National Academy Press, 1989.
20. Harris F, Wilkins R, eds. *Quiet Riots: Race and Poverty in the United States*. New York:Pantheon Books, 1988.
21. Hayes-Bautista DE, Shink WO, Chapa J. *The Burden of Support: Young Latinos in an Aging Society*. Stanford, CA:Stanford University Press, 1988.
22. Limerick PN. *The Legacy of Conquest: The Unbroken Past of the American West*. New York:W.A. Norton, 1987.
23. National Center for Children In Poverty. *Five Million Children: A Statistical Profile of Our Poorest Young Citizens*. New York:Columbia University, 1990.
24. Bullard RD, Grigsby E, Lee C, eds. *Residential Apartheid: The American Legacy*. Los Angeles:UCLA Center for Afro-American Studies, 1994.
25. Surface Transportation Policy Project. *Getting A Fair Share: An Analysis of Federal Transportation Spending*. Washington, DC:STPP, 1996.
26. Arnold CA. Planning Milagros: Environmental justice and land use regulation. *Denver Univ Law Rev* 76(1):1–153 (1998).
27. National Institute for Environmental Health Sciences. *Health Disparities: Linking Biological and Behavioral Mechanisms with Social and Physical Environments*. Request for Application. RFA #ES-00-004 (1999).
28. Kuehn RR. *A Taxonomy of Environmental Justice*. *ELR News & Analysis*. Washington, DC:Environmental Law Institute, 2000.
29. Ruhl JB. Seven degrees of relevance: why should real-world environmental attorneys care now about sustainable development policy? *Duke Environ Law Policy Forum* 8:273–293 (1998).
30. National Institute for Environmental Health Sciences. *Advancing the Community-Driven Research Agenda: Conference Report*. Conference on Advancing the Community-Driven Research Agenda, 27-29 October 1997. Research Triangle Park, NC:NIHES.
31. Institute of Medicine. *The Future of Public Health*. Washington, DC:National Academy Press, 1988.
32. Greenberg M, Popper F, West B, Kruekeberg D. *Linking City Planning and Public Health in the United States*. *J Plan Lit* 8(3):235–239 (1994).
33. Institute of Medicine. *Rebuilding the Unity of Health and the Environment: A New Vision of Environmental Health for the 21st Century*. Washington, DC:National Academy Press, 2001.
34. *Bean v. Southwestern Waste Management*. Case No H-79-2215, U.S. District Court, Southern District Texas, Houston Division, Houston, TX, 21 December 1979.
35. Bullard RD. *People of Color Environmental Groups: 1994-95 Directory*. Atlanta, GA:Clark-Atlanta University, 1994.
36. Gauna J. Unpublished observations.
37. Lee C. Unpublished.
38. Clinton WJ. Executive Order 12898. *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. *Fed Reg* 59:7629 (1994).
39. U.S. EPA. *Integrated Federal Interagency Environmental Justice Action Agenda: Working Together Towards Collaborative and Innovative Solutions*. EPA/300-R-00-008. Washington, DC:U.S. Environmental Protection Agency, 2000.
40. Lee C. Unpublished observations.
41. Nelson M. Unpublished observations.
42. Lee C. Unpublished.