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Chapter 22

Environmental Justice: a Global Perspective

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22.1 Introduction

The environmental justice movement began in earnest in the United States (U.S.) in the 1980s. This movement began as a grassroots effort to address the issue of toxic waste disposal in poor and minority communities. The environmental justice movement shares aspects of both the social justice and environmental movements [1]. Often the term environmental justice is used interchangeably with the terms environmental racism and environmental equity. Although these terms sound alike, each has its own specific meaning. Environmental racism refers to any policy, proactive or directive, intentional or not, that differentially affects the environment of individuals, groups or communities based on their race [1,2]. The term environmental equity holds that all populations should bear a proportionate share of environmental pollution and health risks. Environmental justice is a broader term that encompasses both of these concepts and implies that laws must be applied with fairness and impartiality regardless of socio-economic differences, race, income, or geographic location. Therefore, environmental justice is defined as the achievement of equal protection from environmental and health hazards for all people regardless of race, income, culture, or social class.

Environmental justice refers to the distribution of environmental risks across population groups, as well as the policy responses to these distributions. The four main areas of environmental justice focus upon: (1) the distribution of

environmental hazards; (2) the distribution of the effects of environmental problems; (3) the policy making process; and (4) the administration of environmental protection programs. By focusing on these four areas, one can more easily examine and understand the issue of environmental justice, and as a result, develop strategic methods for addressing the issue. At the federal level, the U.S. Environmental Protection Agency (EPA) has taken the lead in the environmental justice movement by developing formal goals. These goals are:

No segment of the population, regardless of race, color, national origin, or income, as a result of EPA's policies, programs, and activities, suffers disproportionately from adverse human health or environmental effects, and all people live in clean, healthy, and sustainable communities. Those who live with environmental decisions—community residents, State, Tribal, and local governments, environmental groups, businesses—must have every opportunity for public participation in the making of those decisions. An informed and involved community is a necessary and integral part of the process to protect the environment [3].

While the majority of the literature on environmental justice focuses on issues in the U.S., recently more attention has been given to environmental justice issues around the world. The focus of this chapter is environmental justice from a global perspective. First, a chronological history of the development of the environmental justice movement will be provided. Next, a review of the recent environmental justice literature will be presented. The chapter will then focus specifically on global environmental justice issues.

22.2 Literature Review

22.2.1 *Chronological History of the Environmental Justice Movement in the United States*

The first concerns about environmental justice were raised in 1971 when the Council on Environmental Quality published its annual report acknowledging that racial discrimination adversely affects urban poor and the quality of their environment [4]. This was one year after the EPA was created, the National Environmental Policy Act was passed by Congress, and the first Earth Day had been celebrated [5].

The next major event in the environmental justice movement was Bullard's 1979 study of an affluent African American community's attempt to block the siting of a sanitary landfill [4]. In 1982, the environmental justice movement truly gained recognition when the residents of predominantly black Warren County, North Carolina protested against the siting of a polychlorinated biphenyl landfill in their county [4–7]. The protest in Warren County set off a chain of protests in the community, similar to the demonstrations of the 1960s Civil Rights Movement. These protests led to an investigation by the General Accounting Office of the socioeconomic and racial composition of communities surrounding the four major hazardous landfills in the southern region (U.S. EPA Region 4) of the U.S.,

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which included the states of Mississippi, Alabama, Georgia, South Carolina, North Carolina, Kentucky and Florida [8]. The authors of the GAO study found that in 1983 three of the four landfills were located in predominantly black neighborhoods.

In 1987, the United Church of Christ followed the Warren County protests with a study in which patterns associated with commercial hazardous waste facilities and uncontrolled toxic waste sites were examined [9–12]. The study found that when examining the demographic characteristics of communities with commercial hazardous waste facilities:

Race proved to be the most significant among variables tested in association with the location of commercial hazardous waste facilities. This represented a consistent national pattern;

Communities with the greatest number of commercial hazardous waste facilities had the highest composition of racial and ethnic residents. In communities with two or more facilities or one of the nation's five largest landfills, the average minority percentage of the population was more than three times that of communities without facilities (38 % vs. 12 %);

In communities with one commercial hazardous waste facility, the average minority percentage of the population was twice the average minority percentage of the population in communities without such facilities (24 % vs. 12 %) [12].

In addition to the above findings, the report illustrated that three out of the five largest commercial hazardous waste landfills in the U.S. were located in predominantly black or Hispanic communities. These three landfills accounted for 40% of the total estimated commercial landfill capacity in the nation [12]. It was concluded that the distribution of commercial hazardous waste facilities located in minority communities fits the pattern found in the South. In addition, in the study it was found that race was the single best predictor of where commercial hazardous waste facilities were located, even when other socio-economic characteristics such as average household income were taken into account.

22.2.2 Environmental Justice Received National Recognition

Following the report by the United Church of Christ, three other major events in the environmental justice movement took place in 1990. First, Bullard published his book, *Dumping in Dixie* [13], considered by many as the first textbook on environmental justice. In his book, Bullard chastised the federal government for the "urban apartheid" which exists in the U.S. Bullard blamed all levels of government for institutional racism and discriminatory land-use policies and practices due to their influence on the creation and perpetuation of racially separate and unequal residential areas for blacks and whites. He also asserted that the push for environmental justice was an extension of the Civil Rights Movement of the 1960s. Two other important arguments of Bullard's book revealed that environmental discrimination is easier to document empirically

than to prove in a court of law, and that Florida was one of the three states in the U.S. known for not having strong pollution prevention and environmental programs.

Also in 1990, the University of Michigan School of Natural Resources hosted a working conference of national scope called the Conference on Race and the Incidence of Environmental Hazards. The conference focused on the identification of further research towards understanding the environmental risks faced by minority and low-income communities and pointed out that the data on environmental injustices had been available for over two decades [14]. The recommendations of the conference were summarized in a report and are as follows: (1) racial and socioeconomic equity considerations must be included in Regulatory Impact Assessments; (2) the ability of historically black colleges and universities and other minority institutions must be enhanced to encourage participation and contribution in the development of environmental equity; (3) an effort must be made to appoint special assistants for environmental equity at decision-making levels within the EPA; and (4) a policy statement on environmental equity must be developed.

As a result of the Michigan conference, then EPA Administrator William Reilly created the Environmental Equity Workgroup in March of 1990. The Workgroup focused on three tasks which were to: (1) review and evaluate the evidence that racial minority and low-income people bear a disproportionate risk and burden of environmental pollution and hazards; (2) review current EPA programs to identify factors that might give rise to different risk reduction and develop approaches to correct such problems; and (3) review institutional relationships, including outreach to and consultation with racial minority and low-income organizations, to assure that the EPA was fulfilling its mission with respect to these populations.

In 1992, the EPA released the report titled *Environmental Equity: Reducing Risk for All Communities* [6]. The term environmental equity was the former term used by the EPA to describe environmental justice. This report highlighted how the issue of environmental equity may be approached from several different perspectives, examining factors such as region, ethnic/racial group, type of pollutant and type of illness caused as a result of exposure to pollutants.

The next major event in the environmental justice movement was the publication of a 1992 *National Law Journal* article which demonstrated that there were major inequities in the way the U.S. EPA enforced its laws [11,15]. The authors argued that there was a racial divide in the way the U.S. government cleaned up toxic waste sites and punished polluters. The authors stated that white communities see faster action, better results, and stiffer penalties than communities where blacks, Hispanics, and other minorities live [15]. Due to the heightened publicity the environmental justice movement received, from the aforementioned publications, the Office of Environmental Equity was established at the EPA in 1992 [3,16]. The name was later changed to the Office of Environmental Justice (OEJ).

The establishment of the OEJ by the U.S. EPA gave the environmental justice movement increased credibility and legitimacy. Because of the creation of the OEJ in EPA, the Agency Administrator, Carol Browner, made environmental

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justice an agency priority in 1993 [3]. In addition to the establishment of the OEJ in 1993, the EPA also established the National Environmental Justice Advisory Council (NEJAC). The NEJAC is a federal advisory committee that was established by charter on September 30, 1993, to provide independent advice, consultation, and recommendations to the Administrator of the U.S. EPA on matters related to environmental justice [17].

22.2.3 President Clinton Formally Addressed Environmental Justice

President Clinton issued Executive Order 12898, titled *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, on February 11, 1994 [18]. The Executive Order designated eleven federal agencies to be accountable for environmental justice. The Executive Order stated that as part of the National Performance Review (a federal agency reorganization plan), each federal agency will make achieving environmental justice a part of its mission. Agencies will accomplish this by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies and activities on minority populations and low-income populations in the U.S. and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands. Additionally, Executive Order 12898 created the Interagency Working Group on Environmental Justice which is comprised of eighteen executive agencies and offices. The group's members are the Department of Defense, Department of Health and Human Services, Department of Housing and Urban Development, Department of Labor, Department of Agriculture, Department of Transportation, Department of Justice, Department of the Interior, Department of Commerce, Department of Energy, Environmental Protection Agency, Office of Management and Budget, Office of Science and Technology Policy, Office of the Assistant to the President for Domestic Policy, National Economic Council, Council of Economic Advisers, and such other government officials as the President may designate. The Working Group's main goals, as laid out in the Executive Order, are to: (1) provide guidance to federal agencies on criteria for identifying disproportionately high and adverse human health or environmental effects on minority populations, (2) assist in coordinating data collection, (3) examine existing data and studies on environmental justice, and (4) develop interagency model projects on environmental justice that show evidence of cooperation among federal agencies. After reviewing Executive Order 12898, it is evident that the primary focus of the order was on the federal level. Because of this federal emphasis, one of the criticisms of the order points to the need to devote more attention and resources to the local and state level, where administrators of environmental programs have a better understanding of their communities' needs.

Following the signing of the Executive Order, EPA Administrator Browner emphasized her support for environmental justice issues in her 1994 testimony before the House Appropriations Committee [19]. In her testimony, the

Administrator expressed the EPA's support for a new generation of environmental protection which invests in several strategic approaches to the issue including, among other things, environmental justice. In identifying how the agency will integrate environmental justice throughout its programs, the Administrator stated the agency will examine permitting, grants, data collection and analysis, and enforcement.

After the signing of the Executive Order, several other events occurred to impact the environmental justice movement. In 1994, a report was issued by the United Church of Christ titled *Toxic Waste and Race Revisited* [3]. This report strengthened the association between race and the location of waste facilities. In 1995 the first Interagency Public Meeting on Environmental Justice was held at Clark Atlanta University in Atlanta, Georgia. The purpose of the meeting was to provide an opportunity for the public to share concerns and recommend changes in the federal agencies' environmental justice strategies. In 1997 the OEJ released the *Environmental Justice Implementation Plan*. This plan outlined specifically how the agency would implement the rules identified in Executive Order 12898.

From the late 1990s until the present, the U.S. EPA has worked to meet the needs of communities in the U.S. most impacted by environmental justice issues. The agency has held outreach activities and workshops in addition to providing funds directly to impacted communities via grants. These include the Small Grants Program and the Community University Partnership Grant Program. Through the Small Grants Program, EPA awarded communities across the U.S. thousands of dollars to address their specific needs. In Region 9 alone, which includes California, Arizona and Hawaii, the Agency awarded 15 Small Grants to support community-based efforts. These efforts included a \$20,000 award to the Hualapai Tribe's Used Oil Recycling Project in Peach Springs, AZ and another \$20,000 to the Toxic Free Barrio Logan Campaign in National City, CA. These grants provided much needed funding to educate community members about environmental hazards and to help clean up toxic pollution. This community-based approach has enabled representatives from the U.S. EPA to see firsthand the people and communities most impacted by environmental justice issues. Additionally, the U.S. EPA has received valuable input from NEJAC which has held yearly meetings around the U.S. The ongoing dialog between the members of NEJAC and the U.S. EPA has enabled the Agency to receive valuable input from members of the academic and non-profit sector.

22.2.4 Analysis of Recent Environmental Justice Literature

Thus far, a basic overview of the major factors that contributed to the advancement of the environmental justice movement has been the focus of this chapter. The next part of this chapter provides an in-depth review of the recent literature on environmental justice.

The majority of the literature written on the issue of environmental justice appeared in the 1990s. Edwards [20] focused his argument for social and environmental justice on the issue of sustainable development in the U.S. The

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author made three major points relevant to the environmental justice movement: (1) there can be no sustainable development in the U.S. without a sustained commitment to social justice; (2) ecologically sound and socially equitable development require a transformation of the current operating paradigm, which juxtaposes economic development against environmental protection; and (3) sustainable development in the U.S. must uniformly occur. The author drew the attention to three different but related issues which may be applied to the environmental justice movement. Thus, Edwards argued, in order to have sustainable development minority communities must become integral players in the development process.

When examining environmental justice, the issue of risk plays an important role. It is difficult to measure environmental risk to all groups in society [2]. However, the Republican majority in Congress sought to make risk assessment the foundation for a major reevaluation of federal environmental policy [21]. Environmental justice examines the risk exposure of minorities and low-income groups. Finkel and Golding [22] promoted the use of a refined comparative risk assessment (CRA) in order to achieve sensible priorities. The more refined approach would firm up the scientific underpinnings and/or soften them by actively involving laypeople in the ranking exercises. The two main goals of CRA are risk reduction and risk assessment. However, environmental justice scholar Robert Bullard, as noted by Finkel and Golding, argued that risk-based priority setting does not always work in favor of minority populations. Bullard argued that risk-based priority setting may perpetuate the failure to tackle the true hot spot. Instead of CRA, Bullard argued for an environmental approach which puts priority on all of the obvious geographic areas where minorities and low-income populations faced multiple risks from many sources.

Aside from CRA and the multiple risk approach, Burns et al. [23] found that perceptions of risk and social responses were more strongly related to exposure to risk than to the magnitude of exposure. The authors argued that what human beings perceived as threats to their well-being was influenced by their values, attitudes, social influences, and cultural identity. The authors discussed the framework of social amplification of risk, which integrated the technical assessment and the social experience of risk.

When examining the possible reasons why minority communities were often overlooked in the risk assessment process, these authors argued that due to the socialization of individuals, minority groups are socialized to accept a certain level of environmental risk as normal, whereas middle to upper-class, non-minority communities saw the same level of environmental risk as much more severe, thus calling greater media and government attention to these perceived risks. The outcome of this type of risk assessment was faster resolution of environmental problems in non-minority and non-poor communities. This type of risk assessment process was identified as one of the leading factors contributing to environmental racism that appeared in the literature.

Bullard [24] argued that minority communities were not more accepting of environmental hazards than non-minority communities. Instead, Bullard argued for example, that minorities' lack of social power was the main determinant of where hazardous waste sites were located. Bullard [25] also asserted that

environmental racism exists within local zoning boards, as well as the U.S. Environmental Protection Agency and nongovernmental organizations such as mainstream national environmental and conservation groups.

Corroborating Bullard's argument that race is the single most significant determinant of a population's level of exposure to environmental pollution, Goldman [9] empirically demonstrated that both people of color and those with lower incomes faced disproportionate environmental impacts in the U.S. However, Goldman argued that racial disparities were more frequently linked to higher-than-normal levels of environmental pollution than income disparities. Goldman cited a study conducted by the National Wildlife Federation which examined 40,000 five-digit ZIP code areas in the U.S. Five different environmental concerns were examined in the study: (1) locations of industrial facilities, (2) human exposure to toxic substances, (3) ambient concentrations of conventional air pollutants, (4) regulatory costs or benefits, and (5) health effects. The study demonstrated that in 87% of the tests racial disparity was evident when examining each of the above five criteria, compared with 74% of the tests of income disparity. Thus, according to the study, race, rather than income was a more significant determinant of environmental pollution.

Some of the reasons for this racial disparity were explained through a historical perspective [26]. Lord and Shutkin argued the legal system had perpetuated environmental injustice by misreading or disregarding minority communities' history. The authors asserted that a flawed or careless approach to history was often a root cause of environmental injustice. The authors argued that the idea of history as it applied to law ought to be enriched, to be viewed as embodying past injustices and aspirations of communities. The authors used the cases of *Byda v. Board of Appeal of Boston* and *State of Vermont v. Elliott* to emphasize the importance of decision makers not only reckoning with history, but that communities fighting for environmental justice must articulate and advance a particular approach to history. The authors identified the relationships between different groups in society and said that the exclusion and subordination of one group by another ought to be a part of any responsible public history. They argued it is only when the issues of exclusion and subordination become a part of public history, and decision makers begin to adequately address the question of justice, will past injustices be corrected. They asserted historical treatment of a group may be a pivotal issue in determining present and future distribution of environmental burdens and benefits. The authors argued that these sorts of issues would challenge the status quo and lead to social change.

Environmental Protection Agency employee Deeohn Ferris also noted the impacts of past discriminatory practices affecting environmental policies [27]. Ferris argued that past discriminatory state and local sitings and land use practices appeared to guide existing and future land use decisions. Ferris argued that due to these past discriminatory patterns, Latinos were 32% more likely to live among multiple hazards, blacks were 35% more likely, and Asian Americans were up to three times more likely to live with combinations of hazards [27]. Ferris also argued that unequal environmental protection was a nationally significant issue and race was the predominant indicator of who was exposed. In order to correct the current situation, Ferris argued that Congress

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Austin and Schill [28] argued the method which could be used to correct past discriminatory practices was to include more minorities in the decision-making process. Several authors argued that the lack of participation of minorities in decision making enhanced the tendency for the Not In My Back Yard (NIMBY) Syndrome [7,28,29]. The NIMBY Syndrome resulted when residents of a given community perceived a project as an environmental threat. This perceived environmental threat resulted in the rapid mobilization of local residents and their outside supporters against the industry in question [29].

22.3 Global Environmental Justice Issues

Thus far this chapter has concentrated on the environmental justice movement in the U.S. Now the focus will shift to examining environmental justice from a global perspective. During the 1980s and first part of the 1990s, the environmental justice movement was building strength and recognition in the U.S., moving from a local grassroots movement to a national issue. Now that environmental justice is well established as an issue of national importance, the U.S. EPA and scholars are addressing the issue from a global perspective.

One scholar, Schlosberg, [30] argues that achieving global environmental justice must involve three things: (1) equity in the distribution of risk; (2) recognition of the diversity of those impacted by environmental pollution; and (3) participation in the environmental policymaking process. The author notes in the U.S. the issue of distribution is consistently a key issue with environmental justice, but it is always linked with recognition and political participation. The same can be said for the global environmental justice movement. According to Schlosberg, the unequal distribution of environmental pollution on a global level is tied to the inequity of socio-economic and cultural status. These impacted communities are generally not politically connected. Schlosberg notes the recent actions by protesters against the most visible institutions of the new global economy—the World Trade Organization (WTO), the International Monetary Fund (IMF), and the World Bank—involve themes of environmental justice. When examining the issue of environmental justice from a global perspective Schlosberg states:

A singular focus on justice as distribution...is not only limited in theory, but it cannot encompass the broad and diverse demands for justice made by the global environmental justice movement. Demands for recognition of cultural identity and for full democratic rights are integral for justice as well...[30].

Schlosberg also indicates how the global environmental justice movement demonstrates unity without uniformity by highlighting the plurality of the movement towards a unified goal. This is similar to the development of the movement in the U.S.

22.3.1 *Environmental Pollution in Developing Nations*

When examining the issue of environmental justice from a global perspective Adeola [31] presents three theoretical frameworks: dependency theory, the internal colonialism perspective, and the global environmental justice perspective. Each of these three perspectives will now be discussed.

Dependency theorists contend dependence is a condition in which the economy of certain countries, such as Third World countries, is influenced by the development and expansion of the economy of other countries, such as industrialized nations [32]. In this situation, the less developed nations are dependent upon the industrialized nations for their economic livelihood. The dependency theory focuses on industrialized nations shifting environmental burdens disproportionately to developing nations [31,33,34].

The internal colonialism perspective is another theory related to global environmental justice issues. According to Blauner [35], internal colonialism, unlike classic colonialism, is a condition where the dominant group and the subordinate groups coexist and are indigenous within the same culture. The dominant group represents a majority, as is the situation with the Ogoni minority and the dominant ethnic groups in Nigeria (which will be discussed later in this chapter). The three classic elements of internal colonialism in Nigeria include: (1) an ethnic-centered leadership, controlling and exploiting the natural resources of oil-rich minority communities for the benefit of the dominant ethnic groups; (2) the union between core ethnic groups such as the military, multinational corporations (MNCs), political elites and other state enterprises that represses the minorities; and (3) widespread damaging ecological disruption followed by the destruction of the basic modes of subsistence of the minority population.

The third theory offered by Adeola is the global environmental justice perspective. This perspective focuses on the pattern of the distribution of hazardous waste and toxic agents, including substances banned in the U.S., following the path of least resistance from developed nations in the North to developing nations in the South. Adeola contends that developing nations in the South are becoming reservoirs of garbage, toxic waste, DDT, and other hazardous products produced in industrialized nations. "Annually, approximately 50% of the officially acknowledged volume of exported hazardous waste is channeled to less developed nations. The number of countries involved in export and import schemes, volume of trade, and properties of materials involved are often difficult to establish due to the covert and criminal nature of the transactions" [31]. In the 1980s the number of Third World countries accepting hazardous waste increased when these countries faced difficult economic times.

Adeola argues that those most responsible for industrial pollution are the ones with the wealth and power. According to Adeola MNCs strip developing countries of their natural resources such as timber and minerals, as well as hydroelectric and other mega-industrial projects. In these developing countries, the indigenous people and other poor and marginalized groups bear the brunt of the negative environmental disruption caused by resource extraction.

The dumping of toxic waste is another problem faced by developing nations. Adeola argues that the disproportionate environmental burden these developing countries bear constitutes a violation of basic human rights: "Because human rights involve the assurance of people's means of livelihood, any threats to environmental bases of livelihood could be considered a violation of basic human rights" [31]. Adeola contends there are several factors contributing to the environmental injustices taking place in developing nations. One is the fact that most developing nations do not have rigorous national environmental laws and sanctions against polluters, thus leaving the vulnerable people little means of achieving legal action. Second, most developing nations are desperate to accept pollution for economic gain, making these countries attractive to MNCs for the disposal of their toxic waste dumping. According to the Baram [36] and Moyers, [37] MNCs' operations in underdeveloped countries involve the use of hazardous products, the extraction of natural resources, and the spread of toxic substances, all of which pose immediate and long-term health risks to the indigenous people.

22.3.2 *Corporate Transnational Environmental Crime*

According to Simon [38] corporate environmental crime has a negative impact on developing nations. Simon argues large U.S.-based corporations often engage in the illegal dumping of toxic waste, both in the U.S. and abroad. The industries noted for being responsible for 60% of all corporate offenses prosecuted by the Department of Defense between 1974 and 1976 are petrochemicals, pharmaceuticals, and automobile manufacturing [39]. The advanced nations generate 400 million tons of toxic waste annually, 60% of which comes from the U.S. [40].

There is a high cost associated with disposing of waste in the U.S. The U.S. EPA requires companies to provide onsite disposal facilities for toxic waste, which costs approximately \$30 million and takes years to construct. Therefore, it is appealing to these companies to export their waste to Third World nations where the toxic waste may be disposed of for as little as \$20 a ton [38]. Simon [38] contends bribes are taken by Third World government officials to establish toxic waste dumps in their countries.

In response to the growing problem of developing nations being the depositories of hazardous waste, representatives of 117 nations gathered in Basel, Switzerland in 1989 to develop a treaty addressing the issue of toxic waste exportation. The Basel Convention calls for signing nations to accurately label all international waste shipments, in order to stop waste shipments to nations that have banned the toxic substance. However, there are several loopholes. One is that the treaty does not address waste shipments intended for recycling [37]. Therefore, thousands of tons of waste are disguised as recyclable waste and shipped across several international borders.

When examining the issue of toxic waste dumping from a cost/benefit perspective, some argue that it makes economic sense for developed nations to pay developing nations to deposit their hazardous waste. It has even been stated by Lawrence Summers, a World Bank official, that the lives of those in

Third World countries are considered of less value than those of the First World [41]. To suggest that the lives of those in the Third World are of less value than those in the First World is an extremely racist perspective. This type of rhetoric by high level government officials is not only damaging to international relations, it benefits no one. Both of these arguments make little sense from a human rights or economic standpoint. Not only does the mass influx of hazardous waste to developing nations pose immediate and long-term health problems to local people, these toxic waste products harm the very environment from which MNCs are interested in extracting resources. Additionally, developing nations have less technological capacity to safely store and/or dispose of toxic waste products. Therefore it is even more harmful for developing nations to accept toxic waste than it is for developed nations to dispose of the material.

22.4 Cases of Global Environmental Injustice

There are numerous countries throughout the world facing environmental justice issues. Now several examples of global environmental injustices will be presented. The regions to be highlighted are Nigeria, South Africa, and the U.S.-Mexican Border Region.

22.4.1 *Nigeria's Ogoniland: a Region of Contrasts*

In the African country of Nigeria, the Ogoni people have struggled for control of their land since the colonial period [32]. In the late 19th century the Ogoni people staged a strong armed resistance against colonial occupation of their territory until 1908 when the region was secured by the colonial power [42]. Ogoni is an area of half a million people in the Niger Delta [43]. The Delta region produces 90% of the country's foreign earnings, making Nigeria the seventh largest producer in OPEC. Ogoniland is the home of Nigeria's major fertilizer plant, two oil refineries, a large petrochemical plant and other oil-servicing businesses. By 1972 there were six oil fields producing a combined daily output of more than 200,000 barrels of oil. In the mid 1990s, in response to the Ogoni people's peaceful protests, the ruling military dictatorship imposed direct military rule. During these years more than 3000 people died.

Ogoniland is a region of contrasts—rich in natural resources, yet the Ogoni people remain living in poverty, in an ecologically devastated region, lacking basic infrastructure and plagued by environmentally induced health problems. According to the Sierra Club [44], Multi National Oil Companies (MNOCs) such as Royal Dutch Shell and others such as Chevron Corporation, have taken more than \$30 billion from Ogoniland, leaving behind ecological devastation, poverty, environmentally caused illnesses, and a shorter life expectancy among the people. While major oil corporations have successfully withdrawn billions of gallons of oil from Ogoniland, the region still lacks basic infrastructure such as good roads, electricity, pipe-borne water, hospitals and schools [45]. While the MNOCs and the military are reaping the benefits of the oil drilling and the refinery activities, the landscape of Ogoniland has been completely devastated

by oil spills, hazardous waste dumping, and toxic gas emissions. These destructive activities of the MNCOs have left the soil, water, and air of Ogoniland highly contaminated. For a group of people who are subsistence farmers, the negative environmental impacts of the MNCOs have had severe consequences for the Ogoni people. The farm fields are crisscrossed with pipes for the oil, making it difficult to farm the land and dangerous for the elderly farmers who try to climb over the pipes. The government does not require the MNCOs to conduct environmental impact statements for the region to determine the effects of the oil-related activities. Thus, the rights of the Ogoni people to a safe, clean, and healthy environment continue to be violated. Naanen [42] describes the plight of the Ogoni people as a case of genocide by the MNCOs against the local citizens, under the leadership of the military government in Nigeria.

In response to the problems of the Ogoni people, Movement for the Survival of the Ogoni People (MOSOP) was formed in 1990. Under the leadership of MOSOP president Kenule Saro-Wiwa, MOSOP drafted the Ogoni Bill of Rights (OBR). This bill seeks to: (1) provide the Ogoni people a reasonable share of the oil revenue from Ogoniland; (2) reduce the environmental degradation by oil producing MNCOs; and (3) provide the people of Ogoniland greater political autonomy to participate in the affairs of the republic as a distinct and separate entity [31]. The cause of the Ogoni people has also received the attention of several global organizations. In 1992 the case was presented before the United Nations Commission on Human Rights in Geneva and in 1993 Ogoni became a registered member of the Unrepresented Nations and Peoples Organization based in The Hague. Additionally, the New York-based International Federation for the Rights of Ethnic, Linguistic, Religious, and Other Minorities has become interested in the Ogoni case, as have several other non-governmental organizations (NGOs).

While the case of the Ogoni people has received worldwide attention, it has suffered several setbacks as well [31]. In 1995 founding president of MOSOP, Kenule Saro-Wiwa, was jailed along with 15 other members of MOSOP for engaging in protests against the MNCOs and the military government. He was tried by a military tribunal and executed. The execution of Kenule Saro-Wiwa highlights the adversarial relationship between the Ogoni people and the military government. Despite the execution of their founding president, MOSOP continues to gain world wide support and attention. The organization has developed a website (www.mosop.org) where people around the world can learn about the struggle of the Ogoni people.

22.4.2 Post-Apartheid South Africa

Within the African continent, the issue of environmental justice is not restricted to the country of Nigeria. On August 27, 2002 in Johannesburg, South Africa more than three hundred environmental justice leaders from around the world gathered for the Environmental Justice Forum [46]. This forum was sponsored by the South African-based Environmental Justice Networking Forum (EJNF) and

served as the pre-summit opener of the World Summit on Sustainable Development (WSSD) and the Global People's Forum, a meeting of nongovernmental organizations that coincides with the official government meeting. The forum addressed the many issues post-apartheid South Africans face such as lack of access to energy, poor sanitation infrastructure, and lack of access to clean water.

South African human rights activist Dennis Brutus was critical of the government's slow pace of getting basic services to the people. He noted, "Almost 15 million Black South Africans out of a total population of 43.5 million are without electricity and live on less than \$2 per day" [46]. The lack of access to affordable electricity is one of several issues contributing to health problems in South Africa.

The issue of overcrowding in substandard housing is another issue that contributes to health problems. The apartheid government herded approximately 87% of the black population into 13% of the country's land. Dr. Mildred McClain of Citizens for Environmental Justice based in Savannah, Georgia stated, "The land redistribution movement in South Africa is analogous to the reparations movement in the U.S.A. Both movements have recognized that the path to sustainable development can be achieved by ensuring that the most marginalized have access to the primary tools of economic development—land" [46]. Land redistribution is a core environmental, economic, and political issue.

Another important issue in South Africa is inadequate sanitation, which accounts for over 43,000 child deaths each year. More than 10 million South Africans had their water cut off. This is not an issue unique to South Africa. More than 1.4 billion people around the world lack access to safe water. The lack of access to clean water is one of the world's deadliest problems.

Contributing to the environmental and health problems of the people of post-Apartheid South Africa are polluting industries such as the Impala Platinum Mine, the Rostenburg Quarries, and Chevron Oil. These industries cause pollution problems such as mining waste, water contamination, and land destruction.

22.4.3 United States–Mexican Border Region

The issue of water pollution is also a problem for the people who live along the border of the U.S. and Mexico, referred to as the bi-national region (BNR). The BNR stretches 3141 km (1952 miles) from the Pacific Ocean to the Gulf of Mexico, crossing the four states of California, Arizona, New Mexico, and Texas [47]. The BNR is a 200 kilometer zone that extends for 100 kilometers (62.5 miles) on either side of the border. The BNR is one of the fastest growing regions in North America, especially in some of its sister cities such as the San Diego-Tijuana Metropolitan Area (SDTMA).

The SDTMA is a microcosm for the challenges faced by the entire border region. Both San Diego and Tijuana have experienced rapid growth in the last several decades, particularly since 1980. This rapidly increasing population has put particular strains on the ecosystem in Tijuana. As the population continues to increase, there is a lack of infrastructure in place to handle the growing

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population [48]. In Tijuana a significant portion of the population live in “self built” structures along the hillsides, creating what are called *colonias*. These are villages generally without access to clean water, sewage systems, or dependable and safe electricity. As the population continues to increase in this area, the amount of untreated sewage spilling into the Tijuana River increases. This untreated sewage flows to the Pacific Ocean and migrates up the California coast, negatively impacting the beach communities of San Diego.

These villages also lack paved roads, making the rainy season a dangerous time, often with several severe mudslides. The rest of the year, a lack of paved roads in the arid climate creates a dusty atmosphere with a high volume of particulate matter in the air. This problem has caused the people living in the *colonias* to suffer from a heightened number of cases of asthma and other respiratory illnesses [48].

Another contributor to the health problems of the people in Tijuana is the impacts of the *maquiladoras*. The term refers to foreign-built and -owned factories in Mexico. There is a high concentration of *maquiladoras* in Tijuana. These factories generally produce harmful air pollution. Due to the shared mixed of residential and industrial zones, people living in close proximity to the *maquiladoras* suffer from poor health. The problem is compounded by the lack of aggressive enforcement of environmental laws by the Mexican government. Additionally, there is a lack of scientific data to document negative environmental impacts.

In order to address the many problems that plague the BNR, the U.S. EPA has launched several multi-year programs. Border 2012 is a 10 year, bi-national, results-oriented environmental program for the BNR [49]. The Border 2012 Program is the latest multi-year program implemented under the La Paz Agreement and succeeds Border XXI, a five-year program that ended in 2000. The Border 2012 program focuses on border issues such as air quality and land contamination. On June 9, 2005, the Instituto Nacional de Ecología (a division within the Secretaría de Medio Ambiente y Recursos Naturales, SEMARNAT) unveiled the first air emissions inventory for the six northern states of Mexico bordering the U.S. With the continued efforts of the Border 2012 Program, the many environmental problems of the BNR may finally be addressed.

22.5 Conclusion

This chapter has provided an overview of the history of the environmental justice movement. The recent literature on environmental justice has also been reviewed, and global environmental justice issues have been presented. When examining global environmental justice issues, it is evident from the cases presented that a wide variety of ecological problems impact communities throughout the world. The issue of corporate environmental crime creates an entire set of problems for developing nations. At the same time, countries such as Nigeria legalize the destruction of their land for the sake of oil production. The government of post-Apartheid South Africa is struggling with meeting the needs of its citizens after years of Apartheid rule. Additionally, the U.S. Mexican border

region faces the challenge of coordinating efforts between the U.S. and Mexican governments to address the many issues facing the residents who live along the nearly 2000 mile stretch of land between the Pacific Ocean and the Gulf of Mexico.

While some foreign governments, such as Mexico, are working to address the unjust environmental problems facing their citizens, other states are not as responsive, and are even taking actions to exacerbate the problems. Theoretically, the only international court with jurisdiction over environmental issues is the International Court of Justice (ICJ) in The Hague [50]. However, no environmental disputes have been resolved by the ICJ in over 40 years. One of the problems with the ICJ is the fact that its jurisdiction is strictly limited to disputes submitted by state parties, with no standing provided to individuals, corporations, or other nongovernmental organizations. Aside from the ICJ, the European Court of Justice (ECJ), the European Court of Human Rights, and the Council of Europe have been progressive in defining and implementing international environmental norms that can be adjudicated at the regional and/or municipal level. However, McCallion and Sharma [50] believe the only true way for the wide variety of international environmental issues throughout the world to be properly addressed is through the establishment of an International Environmental Court (IEC). An IEC would be an impartial body established to provide a centralized database for all national, regional, and international environmental laws and regulations.

The right to a clean, healthy environment for everyone on earth should be acknowledged and supported by all governments. Human rights and environmental rights are closely tied issues on the international level, particularly in developing countries. This author supports the concept of an IEC as an impartial international body for citizens to have their cases fairly heard and adjudicated. If foreign governments are non-responsive to the human rights and environmental needs of their citizens, then an IEC would provide citizens around the world impacted by unjust environmental conditions a means of having their cases heard by an impartial body and resolved in a fair manner.

Environmental justice is an issue of both civil rights and environmental rights. Achieving environmental justice for all nations around the world is a challenging task, especially if countries do not support their citizens' civil rights. Therefore, it is important for global organizations such as the United Nations, the World Bank, and the IMF to push for environmental justice and hold governments accountable. The environmental justice movement in the U.S. took decades to achieve national recognition and to prompt action by the federal government. The global environmental justice movement is even more challenging, due to the variety of government structures existing in affected countries. Continued education and outreach is imperative if global environmental justice is ever to be achieved.

Acknowledgments

I dedicate this book chapter to my dear cousin Kelsey.

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