

Like Water for Justice:
A Critical Analysis of the United Nations and the
Inadequate Recognition of Environmental Refugees

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ABSTRACT

As global warming increases, sea levels continue to rise and world populations continue to grow; the Earth is nearing its tipping point. Human action, such as deforestation, mining, and industrialization, has had a profound effect on environments-destroying wetlands, and the natural infrastructure needed to absorb rainfall and maintain vegetation. Due to extreme changes in climate and temperature, people all over the world are increasingly affected by natural disaster. Unable to sustain their livelihoods, these individuals, become environmental refugees and are forced to flee their land and homes to obtain security in another region or country. Currently, there are approximately 25 million environmental refugees worldwide. Despite the soaring numbers, environmental refugees are not legally recognized or protected by the United Nations, and thus do not receive the same rights or assistance as a traditional refugee.

This thesis analyzes definitions and interpretations of Environmental Refugees (ERs) through the frameworks of environmental justice and human rights law and identifies possible avenues of discourse available. Furthermore, this thesis examines the current United Nations definition of refugee and identifies the pros and cons to expanding the current definition

to include those affected by natural disaster. Through the case study of New Orleans, Louisiana (NOLA), it is demonstrated how ERs are not only an issue facing developing countries, but also exist within developed nations. Hurricane Katrina in NOLA is an ethnographic example that demonstrates how during a time of natural disaster, a variety of past and present structural factors may contribute to the violation of human rights. This thesis then concludes with a discussion of possible categorizations of ERs and the concrete benefits of each category, and how lessons from NOLA can and should be applied to other ER situations in order to avoid human rights violations.

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Section 1

INTRODUCTION



Figure 1.0: Filtered Drinking Water (greenelise,2010)

Filtered drinking water: the average individual takes it for granted. However, the label 'Filtered Drinking Water' is more than just an ominous reminder of consumerism (Figure 1.0). These bleak cans were a common sight throughout New Orleans (NOLA) in 2005 and served as a painful reminder to those who survived Hurricane Katrina. Thousands of people were left stranded, with no food, water, or basic sanitation supplies – these cans were a symbol of both hope and disappointment. The water brought hope that there was an end in sight, that with each day, the situation would become better with an increase in aid and supplies. However, the cans also represent a feeling of

disappointment with the federal government for virtually ignoring the plight of its people.

Water is symbolic to NOLA because it inundated and damaged 80% of the city, but also because the small tin cans represent the failure of aid assistance, the lack of reconstruction efforts within the city, and the reality that water had the strength to create instantaneous degradation, causing people to flee their homes and seek refuge wherever they could. These tin cans are considered generic: they contain the same liquid, they are the same size and are made of the same materials; they are considered the same as, or equal to, one another. Like a tin can, humans are generic, they are the same and equal to one another. Thus, this generic tin can symbolizes the encompassing idea that all individuals are equal and have the same fundamental human rights. However, just as water was not equally distributed to the predominantly poor African-American communities in New Orleans, neither were human rights.

Global warming is not only affecting the melting of glaciers and the overall temperature worldwide, but it is also affecting the magnitude of "natural disasters" (Myers 1997, 167). The essence and root of the word "natural" has many "powerful and

complex cultural resonances” (Sturgeon 2009, 17). For the purposes of this thesis, the term “natural” will refer to events (such as hurricanes, tsunamis, floods, etc.) that are described in mainstream language to relay context of a situation that cannot be stopped by human action. The term “disaster” refers to the United Nations official definition: “a serious disruption of the functioning of society, causing widespread human, material or environmental losses, which exceed the ability of affected society to cope using only its own resources” (United Nations 1992, 1).

Human influence and impact may have a negative impact on natural disasters and the scale at which devastation occurs (Myers 1997, 171). In the context of this thesis, “human influence” includes factors such as human land degradation and the human contribution to greenhouse gas emissions; “human impact” refers to the overall visual and measurable result that human action has had on the environment. Deforestation, pollution, and industry development not only destroy environments and the wetlands needed to prevent soil erosion, and act as buffers against storms and maintain agricultural development; they also create harmful greenhouse gas emissions which have a proven effect on global warming and

climate change. As human influence and impact expand, the globe will continue to warm, climates will continue to alter, and the intensity of storms will continue.

The twenty-first century has seen a plethora of natural disasters, including the 2004 tsunami in the Indian Ocean, Hurricane Katrina in 2005 affecting the Gulf of Mexico, the 2010 earthquake in Haiti, and the massive monsoon flooding in Pakistan, also in 2010. At the time of this writing, there are approximately 25 million environmental refugees (ER) worldwide, many of whom are internally displaced within their own countries (Myers 2001, 1). Despite the soaring numbers, ERs are not legally recognized or protected by the United Nations, and as a result do not receive the same rights and assistance as traditional refugees (Townsend 2002, 23). Due to its ambiguous and multifaceted nature, the meaning and rights of the term environmental refugee is debated. This thesis aims to identify possibilities for comprehending the experiences of ERs who are plagued by natural disaster and their possible avenues of recourse.

Theoretically, this thesis analyzes ERs through the frameworks of environmental justice (EJ) and human rights law. Section two looks at the effects of environmental racism on

communities, and how inequality may render people vulnerable when natural disasters strike. ERs are often comprised of members of such vulnerable populations, and thus the framework of human rights law is used to examine what recourse, if any, is available to ERs.

The next section examines more thoroughly the definition of ERs and controversy surrounding the term. Currently, the United Nations does not recognize ERs as a legal social group or entity. However, non-profit organizations, along with a variety of scholars, are increasingly engaging in dialogue pertaining to the rights and status of ERs. Through the comparison of the United Nations categorization of a traditional refugee, this section will identify some of the possible problems and benefits to expanding the United Nations definitions to incorporate ERs.

Section four will look specifically at New Orleans (NOLA) as an ethnographic example of a situation in which ERs were produced. Here, I analyze what events took place during Hurricane Katrina that produced ERs, and what human rights were violated in the process. This section will also look at the history of racism that has plagued NOLA since the 1800's and how the city is affected by environmental racism today.

The fifth section discusses the future of ERs and possible outlets for moving forward. This section will discuss various categorizations and existing legal frameworks for ERs, and will identify the benefits of pursuing each avenue.

The thesis concludes with a brief analysis of Pakistan to demonstrate the global scope of environmental refugee problems, and how lessons from NOLA can and should be applied in order to avoid the human rights violations that took place during Hurricane Katrina. I conclude with implications for future research in this area.

Section 2

THEORETICAL ANALYSIS

Environmental Justice

The environmental justice (EJ) movement has been actively working at the grassroots level since the 1990s, extending political work began during the Civil Rights Era (Bullard 2005, 1). The Environmental Protection Agency (EPA) defines environmental justice as:

The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and

policies. Fair treatment means that no group of people, including racial, ethnic or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal and commercial operations or the execution of federal, state, local and tribal programs and policies (Bullard 2005, 4).

Working together to fight against environmental injustice, EJ groups and organizations have made great strides against issues of “transboundary waste trade, ‘blood for oil’ deals, environmental racism, nonsustainable development and globalization” (Bullard 2005, 1). Through active lobbying, EJ groups strive to hold the EPA accountable to its mandate, which states that the government has a responsibility to:

Enforce the nation’s environmental laws and regulations equally across the board. It is also required to protect all Americans- not just individuals or groups who can afford lawyers, lobbyists, and experts (Bullard 2005, 30).

Despite the EPA’s mandate, environmental laws, regulations and policies are often not applied equally, leaving some individuals, neighborhoods and communities (predominantly poor and/or racial and ethnic minorities) to live in unsafe conditions. Polluting chemical factories are known to

overtake small communities, and many individuals are forced to live on or across from superfund sites (toxic wastelands and dump sites) (Bullard 2005, 5). This exposure to toxicity often results in extreme health problems for people residing in the communities. Health problems, however, are not the only issues. Environmental injustice is evident in weakened ecosystems, unequal protection of racial and ethnic minorities, unequal distribution of resources, and underdeveloped emergency evacuation plans. Environmental justice is a civil and human rights issue, often influenced and hindered by historic racism (Bullard 2005, 5-7).

In the United States, "people of color are disproportionately affected by environmental hazards in their homes, neighborhoods and workplaces" (Bullard 2005, 4). In 1991, at the First National People of Color Environmental Leadership Summit, the Principles of Environmental Justice were developed to "...build a national and international movement of all peoples of color to fight the destructions and taking of our lands and communities" (Bullard 2005, 3). Racial environmental segregation, as we will see in the case of NOLA, is often a product of historic and learned racism. Environmental racism refers to:

Any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups or communities because of their race or color. Environmental racism in public policies and industry practices results in benefits being provided to whites and costs being shifted to people of color. Environmental racism is reinforced by government, legal, economic, political and military institutions (Bullard 2005, 32).

Although EJ has become an important topic among scholars, and the United States has made progress by establishing a National Environmental Justice Advisory Council (NEJAC), “the United States is a long way from achieving a fair and just society in the environmental arena” (Bullard 2005, 7). Section 4 will further discuss the effect that environmental racism has had on poor African-American neighborhoods in NOLA, and demonstrate how and why during Hurricane Katrina these neighborhoods were more negatively affected in comparison to areas of predominantly rich or middle class white people. As environmental racism often targets poor communities, when a natural disaster occurs damage proves to be debilitating, not just devastating. As global warming continues, natural disasters will likely become more intense; existing environmental racism will be exacerbated and human rights more consistently violated. It

is essential that any work now and in the future on global warming and natural disasters encompass an environmental justice framework.

Human Rights

In 1948, the United Nations approved the Universal Declaration of Human Rights. Containing thirty Articles, the document recognizes that people everywhere have an intrinsic right to life, health, and a healthy environment (Bullard 2005, 8). Along with the declaration, two international covenants were later developed: (1) the International Covenant on Civil and Political Rights (ICCPR); and (2) the International Covenant on Economic, Social and Cultural Rights, the ICESCR (Smith 2007, 27). The Covenants were created to elaborate on the human rights listed within the Universal Declaration and present them in a legally enforceable manner (Smith 2007, 27). The ICCPR addresses the right to human life; whereas the ICESCR declares the right to health and to the enjoyment of and full utilization of natural wealth and resources (Moberg 2009, 3). Together, the Declaration and the two Covenants are often referred to as the International Bill of Rights (Smith 2007, 27).

Both international Covenants were developed to further impose binding obligations on the nations abiding by them

(Smith 2007, 27). Currently, however, the ICESCR “does not have a protocol in force that gives individuals the right to make complaints to the monitoring body, and several of the parties to the ICCPR, including the United States, have rendered their ratification essentially ineffective through extensive reservations” (Moberg 2009, 3). Both Covenants allow for the ratification of an Optional Protocol, which states:

A State Party to the Covenant that becomes a Party to the present Protocol recognizes the competence of the Committee to receive and consider communications from individuals subject to its jurisdiction who claim to be victims of a violation by that State Party of any of the rights set forth in the Covenant. No communication shall be received by the Committee if it concerns a State Party to the Covenant which is not a Party to the present Protocol. (ICCPR 1976b,1)

The United States specifically has not ratified the optional protocol on individual communication; thus, an individual, as in the case of an environmental refugee, would not be able to come forward with a complaint (Moberg 2009, 3). In addition, in order to successfully file a human rights claim under either of these covenants, the applicant would have to show causation; as climate change is the result of many components, it would be

difficult to identify one specific cause or person (Moberg 2009, 3). It is also important to note that claims under international law only come into effect after the human right has been violated; therefore, the claims of ERs would not come into effect until after the ER's homes and livelihoods are destroyed and they are even more powerless to affect change (Moberg 2009, 3).

Within the context of defining what an environmental refugee is, it is important to understand how the EJ movement and human rights legal frameworks complement each other. Both of these critical components need to be understood in order to determine an appropriate protocol/remedy for ERs to pursue. Relating environmental racism to the creation of ERs is important when referencing the phenomenon of instantaneous degradation, because often those individuals who are forced to flee are often those living in areas hindered by structural racial disadvantages.

Section 3

DEFINING ENVIRONMENTAL REFUGEES

Although it is estimated there are approximately 25 million environmental refugees currently displaced, as well as 135 million people who are threatened by severe desertification, and 550 million who are subject to chronic water shortages, the United Nations fails to *legally* recognize the expanding problem (Myers 2001, 16.2). However, the United Nations Framework Convention on Climate Change (UNFCCC) does “acknowledge the need to address the movement of people as a result of climate change” (paragraph 6(f), 2010). Despite the lack of ‘official’ recognition, scholars and international aid organizations, such as the International Committee of the Red Cross, support and adhere to the classification of Environmental Refugee (ER) and attempt to aid those in need. Professor Norman Myers of Oxford University, an environmental scientist and economist, was one of the first scholars to coin the term and defines ERs as:

People who can no longer gain a secure livelihood in their homelands because of drought, soil erosion, desertification, deforestation and other environmental problems, together with the associated problems of population pressures and profound poverty. (Myers 2001, 16.0)

While this definition encompasses the general ideas of what would characterize an ER, it does not encompass the specifics of natural disaster and/or what I am terming instantaneous degradation. These two components become increasingly important when developing appropriate recourse and immediate aid solutions for ERs. Some ERs are affected by slow environmental degradation, and thus they and/or aid organizations and policymakers have more time to develop a relocation plan. However, when natural disasters strike and instantaneous degradation occurs, communities are immediately damaged and often for many years become virtually uninhabitable. The cease of a long-term drought can allow people to return to an area, but the area may not offer the same opportunities and may leave communities without the opportunity for re-growth (Stravropoulou 2008, 11). Other disasters, such as floods or wildfires, may leave an area uninhabitable for a short while, but the area is able to regenerate itself and the temporary environmental refugees are able to return (Stravropoulou 2008, 11). In situations where areas are uninhabitable and/or re-growth is not possible, individuals are forced to permanently relocate and thus become permanent environmental refugees (Stravropoulou 2008, 11).

With no rights and no legal status, ERs not only face enormous obstacles but are also costly for inhabited countries and/or inhabited states, provinces, etc. (Myers 1997, 176). The displacement of millions of individuals not only creates social and political problems, but often economic and environmental problems as well. Myers explains that because ERs are forced to live in environments that are too wet, too dry, or too steep for sustainable agriculture, and are located too close to coastlines or in water-deprived areas, they exacerbate environmental degradation through forced deforestation and soil erosion and increase the rate of environmental decline caused by other factors (Myers 1997, 168). ERs are then forced to move from the destroyed environments towards larger cities that are already “crowded with jobless and desperate masses” (Terry Allen 2007, 1). Cities then become overpopulated, taxed of water and sanitation supplies, and thus social tension increases; the endless cycle of environmental degradation continues.

Currently, there is no legal international protocol or remedy that binds nations to the acceptance of or assistance for ERs. Without a system in place, questions remain about how and where these individuals will begin their new lives (Moberg 2009, 2). Since the 1970s, varied opinions about the definition and

classification of ERs have been divided into three main, often conflicting strands (Dun and Gemenne 2008, 10):

First, disagreement exists between the 'skeptics' – those who refer to the complexity of the migration process and link migration with security issues – and the "alarmists" – those who view environmental factors as the driving force of migration (Dun and Gemenne 2008, 10). The two groups fail to agree on which "push and pull" factors primarily affect and influence migration patterns such as economic, cultural, political, and in the case of the ERs, environmental (Bogardi 2007, 25).

Second, the divide widens through discussion of whether or not environmental migration is forced or voluntary. Dun and Gemenne explain:

The problem is that environmental migration commonly presents itself where there is a slow-onset environmental change or degradation process (such as desertification) affecting people who are directly dependent on the environment... When environmental degradation is a contributing but not major factor, it becomes questionable whether such migration can be called environmental migration (2008,10).

In some cases, a community may experience a rate of slow degradation creating an increased sense of discomfort or

unpleasantness, however, the land/community is still economically viable and may be receptive to rehabilitation. In this instance, the ER could be deemed voluntary, as their present environment could potentially sustain their livelihood yet still they choose to leave (Bogardi 2007, 27). Instantaneous degradation, on the other hand, immediately affects and/or destroys a person's livelihood and people are forced to flee rather than choosing to leave (Bogardi 2007, 29).

The final aspect of definitional controversy involves the expansion of current law and mechanisms that are in place, specifically the United Nations definitions and classifications of traditional refugees (McNamara 2007, 15). Some scholars argue that the definition should be expanded to include those affected by degraded environments and natural disasters, while others argue that the expansion of the current definitions would simply reduce the importance and confuse the meaning of traditional definitions (Stravropoulou 2008, 11).

The term and rights of refugees were developed to aid the needs of post-WWII Europe and its voluntary and involuntary migrations (McNamara 13). The United Nations High Commissioner for Refugees (UNHCR), as stated in Article 1 of the 1951 Convention Relating to the Status of Refugees, defines

a refugee as:

A person who owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion, is outside the country of his nationality, and is unable to or, owing to such fear, is unwilling to avail himself of the protection of that country (United Nations 1951, x).

As international law is not binding by itself, it is at the discretion of the attorney general (or head of state) to determine whether or not a person falls within the definition of a refugee. Often these decisions prove to be politically motivated, and are not followed or enforced by the court (Moberg 2009, 4).

For example, a study conducted by Ramji-Nogales, Schoenholtz and Schrag reveals:

Amazing disparities in grant rates, even when different adjudicators in the same office each considered large numbers of applications from nationals of the same country... A judge might be nearly 100% more likely to voted for an industry requested remand if the judge were Republican than Democratic (2007, 5).

This study represents the difficulty current refugees may face in receiving asylum. The expansion of the definition to include ERs

would further hinder the process and possibly make it even more difficult for traditional refugees. As a strategy to further develop binding criteria and protocol for refugees seeking asylum, the United States developed the 1980 Refugee Act –almost identical to that of the United Nations 1951 Refugee Convention –which defines a refugee as:

Any person who is outside any country of such person's nationality or, in the case of a person having no nationality, is outside any country in which such person last habitually resided, and who is unable or unwilling to return to, and is unable or unwilling to avail himself or herself of the protection of, that country because of persecution or a well-founded fear of persecution on account of race, religion nationality, membership in a particular social group, or political opinion (Moberg 2009, 4).

Based on this definition, ERs do not meet the criteria as traditional refugees because (1) ERs are usually able to seek refuge within the borders of their own country--it is not necessary for them to completely relocate to another country; and (2) ERs are forced to flee due to environmental factors and not because of their race, religion, nationality, or political opinion. The UNHCR explains that refugees usually do not have a

chance to make alternate arrangements of where to stay, or have an opportunity to collect personal belongings or to say goodbye to loved ones. Also, unlike environmental refugees, many traditional refugees have experienced severe trauma or have been tortured (UNHCR 2002, 1). Yet it can be argued that ERs who experience instantaneous degradation may also be traumatized. As depicted by Ahmed and Stacey, Cathy Caruth explains:

... trauma is not experienced as mere repression or defense, but as a temporal delay that carries the individual beyond the shock of the first moment. The trauma is a repeated suffering of the event, but it is also a continual leaving of its site (2001, 2).

Instantly losing one's possessions and livelihood leaves ERs in an indeterminate state. Like traditional refugees, the experience of fleeing, relocating, and rebuilding often proves to be traumatic. Despite the United States having a generally progressive interpretation of the definition of refugee, and although traditional refugees and ERs share similar characteristics of premise and experience, there are still many downfalls to expanding the definition of refugee.

First, expansion of the definition would change the original meaning and importance of a traditional refugee. As there are only a certain number of refugees accepted into countries each year, the addition of ERs would negatively impact the number of traditional refugees accepted by host countries (Moberg 2009, 8).

Second, expansion of the definition would impede financially on current refugee programs. As international law is not binding by itself, member countries that do not agree with the change in definition may stop abiding by international law all together, and/or make it harder for refugees to participate in provided refugee programs and claim asylum in those countries (Moberg 2009, 8).

Third, despite expansion, the definition and programming of traditional refugees would remain too narrow and would not provide sufficient protection for ERs. With the exception of special circumstances such as Cuba, current refugee law does not allow for gradual resettlement of individuals. Moreover, the definition only protects those who have left their home countries thus, "the geographic and temporal limitations of the refugee program will inhibit those who need protection, from qualifying for the program" (Moberg 2009, 8).

Fourth, as the law does not cover gradual resettlement, eventually depleted communities would experience full or instantaneous degradation resulting in mass migration and the development of refugee camps. This would be a hindrance because the mass relocation of a group of people to one area (i.e. refugee camps) would cause further environmental degradation. Honduras and Turkey already refuse to accept asylum seekers due to the environmental damage that refugee camps create (Moberg 2009, 9).

It is evident that expansion of the traditional refugee definition would not develop the solutions needed to address the needs of ERs. However, as the numbers of ERs continue to increase, it is important that the international community continue to discuss the needs and circumstances of ERs in order to develop appropriate laws and protocol through which to assist them. Analyzing past and present events, such as Hurricane Katrina and its impact on New Orleans, can help to predict the future of ERs.

Section 4

NEW ORLEANS

History

New Orleans, Louisiana (NOLA) was founded in 1718, and was inhabited by French and Spanish colonies until it was sold (with the rest of Louisiana) to the United States in 1803 (Hirsch and Logsdon 1996, 1). Currently known as the “Crescent City”, NOLA was originally built on high banks along the curved embankment of the Mississippi River. NOLA overlooks cypress swamplands and the north shore of Lake Pontchartrain, which feeds into the Gulf of Mexico (McQuaid and Schleifstein 2006, i). Over the span of 200 years, the city began to expand and develop onto the lower swamp ground (ibid.,1). As NOLA was created naturally by the flow and sediment distribution of the Mississippi River, the city has had a history of flooding (Kates, Colten, Laska and Leatherman 2006, 14653). At the time of its original founding, NOLA was entirely above sea level; however, with the development of drainage canals and the decrease in wetlands due to the construction of homes, schools and businesses, ground sediment began to compound and the city began to sink (Campanella 2010, 3).

With each flood, the city received the same recovery efforts of building the levees one foot higher than the last water height and further reinforcing safety features and protocol (Figure 2.0). This often resulted in the rich Caucasian populations relocating to new suburbs on higher ground, leaving the poor predominantly African American populations in the core of the city and on land below sea-level (Kates, Colten, Laska and Leatherman 2006, 14653-54). It was not until 1965 that the second wave of levee development began (changes continued until 2000) and the federal government implemented improved drainage systems, further expanded the levees, and sponsored an intricate pumping system (Figure 2.0) (et al., 14654). Scholars and scientists argue that the NOLA flood problem was never truly solved, only maintained, and it was only a matter of time before the 'Big One' (the storm that would 'sink' NOLA) would hit the city (et al., 14654).

Figure 2.0 represents the development of the levee system from 1900-2005, and also shows the distribution borders of the parishes that are closest to Lake Pontchartrain and are considered to be within the immediate flood zone (et al. 14654).

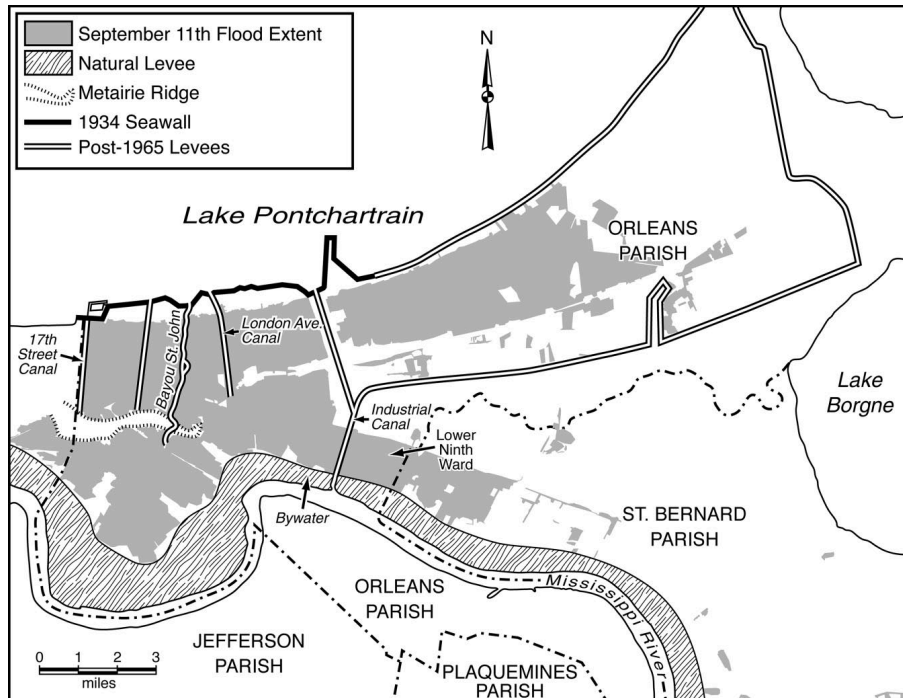


Figure 2.0 Levee Construction, Parish Divisions, and Katrina Flood Area 1900–2005 (Kates, Colten, Laska and Leatherman 2006, 14654).

With a population of over one million prior to Katrina in 2005, NOLA and surrounding region was made up of a predominantly African-American population [67.9%] (Dyson 2006, 5). NOLA also suffers the seventh highest poverty rate out of the 290 largest U.S. counties, which is 76 percent higher than the national average (Dyson 2006, 5). Within the Crescent City, the median household income is well below the national median and, as a result, one in four citizens of NOLA did not own or have access to a means of transportation (Dyson 2006, 5). Despite pervasive issues of poverty, NOLA has a vast cultural

background, from Creole cuisine to jazz music and Mardi Gras. This helps to create a powerful sense of cultural and regional identity (Hirsch and Logsdon 1996, 1).

Historic Racism

Dating back to the 1800s and the days of slavery, NOLA has had a predominantly African American population as well as a history of institutionalized structural racism (Lavelle and Feagin 2006, 53). Not all African Americans were slaves: there were some who were considered 'free'. However, they were forced into private all-Black schools, were not allowed to vote, and were expected to give service to white communities as policemen or slave patrollers (ibid., 55). From 1860 – 1880, African Americans rallied for the integration of schools and public facilities; however, white populations were violently opposed to the idea and expressed the view that:

The compulsory admixture of children of all races, color and condition in the schools, in the same rooms and on the same benches, is opposed to the principles of humanity, repugnant to the instincts of both races, and is not required by any provision of the laws or constitution of this State (Lavelle and Feagin 2006, 56).

This expression of disgust towards Blacks was taken one step further in 1890 when formal “separate but equal” statutes were written into Louisiana state law (Lavelle and Feagin 2006, 57). Post WW-II, Jefferson Parish was developed; however, Blacks were barred from moving there by “economic constraints and blatant discrimination from white realtors” (ibid., 57). From 1950 to 2000, NOLA experienced extreme ‘white flight’ and there was a massive demographic shift as Whites began to leave; the city went from 37 percent to 67 percent Black (ibid., 57). Despite the large African American population, power was not equally distributed. Lavelle and Feagin explain:

Economic and political power has always been held primarily by the white elite and a handful of their chosen lighter skinned black colleagues. In the 1970s blacks were nearly half the city population yet held less than five percent of the highest leadership positions (2006, 58).

Despite the obvious inequalities, until 2000 NOLA was one of the least geographically racially segregated cities in the United States. Since 2000, this has changed:

With more white flight, disinvestment in public schooling, and the outmigration of decent-paying jobs, the city has become more segregated than ever, and the inequities

between rich and poor are as extreme as at any time since slavery (ibid.,58).

Prior to Hurricane Katrina in 2005, two thirds of the city was Black and only 28 percent of the population was white (ibid.,58). The population and class distribution, and its corresponding vulnerabilities, would become shamefully obvious after the events of Katrina.

Hurricane Katrina: Environmental Refugees

Although Hurricane Katrina made landfall on the coasts of three states-- Louisiana, Mississippi and Alabama--Figure 1.0 lists the events that occurred in Louisiana, and specifically in the city of NOLA. The storm that eventually turned into Hurricane Katrina began to develop over the Indian Ocean days before it ever broke landfall, allowing the intensity of the storm to grow (Brinkley 2006, 625). Originally a Category 2 hurricane in a very active hurricane area, Katrina did not stir a sense of urgency for evacuation until it was too late (ibid., 625).

Saturday August 27	Katrina reaches Category 3 hurricane status; Warnings that storm could hit landfall as a Category 5; Mayor Nagin declares a state of emergency and announces a voluntary evacuation of NOLA; many individuals do not evacuate (Brinkley 2006, 626).
Sunday August 28	Katrina climbs to category 4; 8:00 am hurricane reaches category 5 status (the highest possible rating with 161 mile/hour winds); Many counties surrounding NOLA are ordered to evacuate; 9:30 am NOLA declares mandatory evacuation; 4:00pm approximately only 100,000 individuals remain in NOLA, the majority without means of transportation; 4:15pm, FEMA director Michael Brown announces " we are going to need everything that we can possibly muster, not only in this state and in the region, but the nation, to respond to this event" (ibid., 626-627).
Monday August 29	Katrina makes landfall; mass overtopping of levees 8:14am the industrial canal is breached, levees continue to overtop; Lower Ninth Ward is flooded with approximately 8 feet of water; 9:00am Interstate 10 is impassable; Superdome, develops holes in the roof and begins to flood; only 4,000 National Guard Troops in the area; 1:00pm the second levee breach occurs at 17 th Street, first rescue group arrives - The Louisiana Department of Wildlife and Fisheries; 4:00pm more levee breaches occur on London Avenue; approximately 1000 people are rescued from flood waters and taken to the Ernest N. Morial Convention Center, center has no supplies (ibid., 627- 630).
Tuesday August 30	More than 20,000 people seek shelter in Convention Center, still no supplies; 600 are trapped in hospitals, without power; area around the Superdome becomes flooded with 3 feet of water; looting begins out of desperation; 10:00 am reports that efforts to block the canal and levee breaches are unsuccessful; President Bush decides to come back from vacation; Mayor Nagin announces a mandatory evacuation of entire city, informs officers to remove citizens, against their will. (ibid.,631-632)
Wednesday August 31	Water levels stop rising; hospitals still without power; 30,000+ people inside Superdome, thousands more turned away; 9:00am Governor of Louisiana requests assistance of 40,000 troops to further evacuate the city to the Astrodome in Houston; President Bush flies over NOLA for the first time; evacuation of the Superdome begins; looting continues, all officers are ordered to stop evacuations and focus solely on controlling looters (ibid., 632-633).
Thursday September 1	Convention Center now shelters 25,000+ people, still without food, water or sanitation supplies; 4,000 people are stranded on Interstate 10; oil refining and production is at a stand still, multiple oil leaks/spills (ibid., 634).
Friday September 2	Chain of command for the deployment of military personnel not confirmed; hospitals finally evacuated; the airport set up as a medical center; 6,500 troops now present in NOLA; National Guard finally reaches convention centre with supplies; refugees notified that buses are coming to help with further evacuation (ibid., 635).
Saturday September 3	Superdome and convention center are finally evacuated; Texas houses 220,000+ refugees; The death toll continues to rise; Katrina has damaged over 80% of the city and over 90,000 square miles (ibid., 637).

Table 1.0: Hurricane Katrina Timeline of Events

With an active flood history, the citizens of NOLA have always been one step away from becoming ERs. When Hurricane Katrina made landfall on August 29, 2005, those individuals who did not have the means to evacuate actually became refugees. They were forced to flee their homes, while at the same time both the state and federal governments, including the Federal Emergency Management Agency (FEMA), failed to adequately execute a response plan. Those that fled:

Took refuge in the Superdome, the Convention Center, in hospitals and nursing homes, in upper stories of their homes, or on elevated highways, or died during the week before full post storm evacuations could be completed. The evacuated residents travelled or were moved to other cities, and within a month, refugees from New Orleans could be found in every state (Kates et al. 2006, 14654-55).

The massive flooding that engulfed NOLA damaged 80% of the city; however, one of the main concerns was the high level of toxic materials and oil that were found in the floodwaters. Approximately eight million gallons of oil was spilt during Katrina (Tate 2010, 7). Even when the waters receded, most residents were not able to return to their homes due to the mass

contamination. “The flood water turned black and gummy in spots, a sink for bacteria...” (McQuaid and Schleifstein, 2006, 332). It is commonly accepted that the failure of the government to respond adequately and the engineering failures that caused the levees to breach were man-made problems that likely could have been avoided. Years prior to Katrina, it was estimated that soon the ‘big one’ would hit, and New Orleans would flood, leaving thousands of people in dire straits. Despite the warnings, neither the state nor the federal government took action.

Violations of Human Rights

It is evident by the gap in response time—*days* not hours—that there was a lack of communication and mobility failure on the branches of government. Approximately 100,000 individuals were unable to evacuate due to a lack of public or personal transport. As a result, when disaster struck they were forced to flee on foot or by boat to the Superdome and the Convention Center. For over four days, refugees sat stranded with no food, water, sanitation or access to medical supplies. They were forced to defecate where they slept, and to sit among each other’s feces. Many of the elderly perished, and those reliant on prescription medication were put into a state of disarray.

Five of the basic human rights enshrined in the 1948 United Nations Universal Declaration of Human Rights were violated during the events of Hurricane Katrina. Since the declaration is not binding by itself, it is important to look at the ICCPR and the ICESCR as possible avenues for recourse. As previously discussed, the United States has not ratified the Optional Protocol for either of the covenants, meaning that individual ERs would not be able to bring their complaints forward. However, in the case of NOLA, it is important to look at what human rights were violated, and how. Specifically, three articles of the ICCPR were violated. These include:

Article 6 (1): Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life.

Article 7: No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment. In particular, no one shall be subjected without his free consent to medical or scientific experimentation.

Article 9 (1): Everyone has the right to liberty and security of person. No one shall be subjected to arbitrary arrest or detention. No one shall be deprived of his liberty except on such grounds and in accordance with such procedure as are established by law. (ICCPRa 1976, 1-4)

Furthermore, three articles of the ICESCR were violated. These include:

Article 2 (2): The States Parties to the present Covenant undertake to guarantee that the rights enunciated in the present Covenant will be exercised without discrimination of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.

Article 11(1): The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions. The States Parties will take appropriate steps to ensure the realization of this right, recognizing to this effect the essential importance of international cooperation based on free consent.

Article 12(1): The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. (ICESCR 1976, 2-4)

The violations, in the context of NOLA, of the above six articles are further explained in Figure 2.0. Each article is identified with a specific example of how the violation occurred.

Covenant	Article	Violations
ICCPR	6(1): Inherent right to life and protection by law.	Right to life: The lives of those left stranded in NOLA were not valued; if FEMA was better organized, and an emergency plan was executed properly, more lives could have been saved. Protection by Law: The police were supposed to protect and help, however, they concentrated more on arresting and forcing people violently out of the city.
	7: No one should be subjected to cruel, inhuman or degrading punishment.	Cruel or Inhuman: Some areas were not sent aid or evacuated for days; specifically those that were poor, aged, disabled or of African American decent. Degrading: The convention center and superdome did not have proper sanitation supplies, people were forced to defecate in their seats, and sit among each others feces.
	9(1): Right to security.	There was a lack of security throughout the entire evacuation; minimal troops were available because most were in Iraq; navy ships were turned away; when situations became violent in the Superdome or Convention Center, there was no one to control them; people were robbed; those looting stores for supplies were arrested, and some were shot at.
ICESCR	2(2): Rights are to be exercised without discrimination	The majority of individuals left behind with no means of evacuation were African American, disabled, aged or poor; African Americans were considered looters, white people were considered starving; Blacks were among the majority that were arrested.
	11(1): Adequate standard of living	The conditions in the Superdome and Convention Center were below any standard of living. People were denied their right to food, water and sanitation supplies; many were turned away from the shelters all together.
	12(1): Attain physical and mental health	There were little if any medical supplied if available; hospitals were left without supplies and power; many people died in the hospitals, and within the shelters. There were not counselors in the shelters or anyone to aid those that were traumatized.

Table 2.0 Covenant Violations

Further analysis of the Covenant violations via the means of human rights case law, although beneficial, is beyond the scope of this thesis. Thus, the violations will only be further analyzed through the use of the tripartite typology, to respect, protect and fulfill. Tripartite typology is an instrument substitution for the traditional positive/negative dichotomy when analyzing economic, social and cultural rights and civil and political rights (Koch 2005, 81). Koch explains:

The obligation to *respect* requires the State, and thereby all its organs and agents, to abstain from doing anything that violates the integrity of the individual or infringes on her or his freedom, including the freedom to use the material resources available to that individual in the way she or he finds to satisfy basic need.

The obligation to *protect* requires from the State and its agents the measures necessary to prevent other individuals or groups from violating the integrity, freedom of action or other human rights of the individual—including the prevention of infringements of his or her material resources.

The obligation to *fulfill* requires the State to take the measures necessary to ensure for each person within its jurisdiction opportunities to obtain satisfaction of those needs, recognized in the human rights instruments, which cannot be secured by personal efforts. (Koch 2005, 85)

The purpose of the terminology is to connect the two sets of rights by illustrating that compliance with each human right may require a “variety of measures from (passive) non-interference to (active) ensuring of the satisfaction of individual needs, all depending on the concrete circumstances” (Koch 2005, 85).

During Hurricane Katrina, NOLA was in a state of emergency; given the circumstances, and taking into account the reasonable responsibility of the state, the articles discussed above are still violated. In reference to respect and protect, Articles 6(1), 7 and 9(1) of the ICCPR were violated because (1) individuals that were left stranded for days without aid, (2) shelters were not equipped with proper food, water or sanitation supplies (3) individuals that were arrested for looting, should have been protected, as it can be argued they were looting out of necessity. In relation to fulfill, Articles 11(1), 12(1) and 2(2) of the ICESCR were violated because people were denied access to their basic needs and they were discriminated against based on their race and economic status.

Through the use of tripartite typology, it is clear that the rights of many in NOLA during Hurricane Katrina were violated, and the “perfect storm” of natural and social disaster led to

creation of environmental refugees among the city's most vulnerable citizens.

Rebuilding New Orleans

Hurricane Katrina damaged over 90,000 square miles of land, destroyed 300,000 homes, and killed over 1,500 people while creating economic losses of \$150 billion or more (Tate 2010, 8). Despite the destruction, however, there is still hope for NOLA. As Angelle discusses, three critical elements need to be reinstated within the city. First, mechanisms of natural protection need to be rebuilt (i.e. restore wetlands). As it is estimated that wetlands reduce the rate of surge from seven to three feet per second, the Coastal Protection and Restoration Authority (CPRA) was created post-Katrina to help restore the wetlands to increase flood and surge protection (Angelle 2010, 1). Second, a new levee system needs to be engineered. Although NOLA was equipped with 350 miles of floodwall and levees, when Katrina hit, "the levees were almost 2 feet (61 cm) below their original elevations because of subsidence and unstable soils... It was also confirmed that during Katrina, none of the pumping stations were working" (ibid.,1). Levee and pumping systems across NOLA need to be repaired and improved. Third, methods of emergency management need to be

implemented. Post-Katrina, the Emergency Management Reform Act (EMRA) was created to improve communication and reduce loss of life during a natural disaster (ibid.,2).

Despite all of the efforts to rebuild NOLA, evidence of historic racism is still present throughout the city. This is specifically noted in the reconstruction of the levee systems. Figure 3.0 shows the reconstruction of a levee system that protects a large, rich white neighborhood along Lake Pontchartrain. Reinforced with steel, rock, and cement, this wall is calculated to withstand the most powerful of storms.



Figure 3:0 Lake Pontchartrain (greenelise, 2010)

Figure 4.0 shows an area along the 17th Avenue Canal that breached. This levee protects a middle-class mixed neighborhood. It is visually obvious that although the wall was

reconstructed, it was not reinforced with rock like the other areas of the canal.



Figure 4.0 17th Avenue Canal (greenelise, 2010)

Figure 5.0 shows the flood protection system along the poor African American neighborhood of Gentilly. There is no large floodwall, or any sign of construction. Simply, the grass embankment and a pile of rock is all this neighborhood has to protect itself from the natural force of water.



Figure 5.0 Gentilly Infrastructure (greenelise, 2010)

Pervasive racism is portrayed in NOLA both figuratively and structurally through the use of levees and the development of neighborhoods. As climate change continues, and NOLA continues to sink, the risk of flooding will only become more severe. However it is the communities that remain discriminated against based on racial and economic standing that will suffer the most if another storm like Katrina happens again.

Section 5

REMEDIES

Building on the previous discussion of environmental justice and human rights legal frameworks, there are two major remedies that current ERs and potential ERs could pursue.

First, as refugees are considered on a case-by-case basis, ERs could attempt to apply under existing refugee law. In order to do this, applicants need to prove (1) their well-founded fear of persecution; and (2) that they are being persecuted based on their race, nationality, socio-economic class or particular social group (Moberg 2009, 4-6). It is mandatory for applicants to prove that they meet both requirements.

In the case of *INS v. Cardoza-Fonesca* it was deemed that the applicant did have a well-founded fear of persecution, hence

meeting the first requirement. As a result of the case, the U.S. Supreme Court determined that the well-founded fear standard does not require the applicant to prove it is more likely than not that he or she will be persecuted in his or her home country (i.e. 50% chance or more); it was concluded that even a 10% chance of a threatening event taking place may be enough to create fear (Moberg 2009, 4). Based on this case, ERs would have just cause to pursue this avenue, proving a valid fear of instantaneous or gradual degradation due to their geographic location and circumstances.

In reference to the second definitional requirement, the UNHCR Handbook on Procedures and Criteria for Determining Refugee Status (hereafter referred to as the UNHCR Handbook), explains that: "a particular social group is determined by similar social status, habits, and backgrounds" (UNHCR 1979, 13). As similar issues face all ERs, it can be argued that they fit the definition for a social group. However, the UNHCR Handbook also states that "the unifying characteristic cannot be the persecution or the shared risk of persecution" (UNHCR 1979, 13). Thus, applying as a group with the same inherent fear of the potential for displacement via instantaneous degradation would not meet the criteria.

In the case of *Ramirez v. Attorney General of the U.S.*

however, Ramirez, a Columbian farmer, was considered to be part of a valid social group. Moberg explains:

In *Matter of Acosta*, the court held that land ownership, while not an immutable characteristic, was one that people should not be required to change. It therefore held that land ownership was proof of membership in a particular social group for the purpose of the applicant's asylum claim (2009, 6).

As ERs are often displaced in groups and come from the same countries/regions/communities, they could apply for proof of the second requirement based on the clause of similar social group. In certain cases, such as in NOLA, the similar social group could be a specific entity of people in a certain geographic location that could prove their persecution based on structural or environmental racism. Communities that were located in the immediate flood zone that had previously experienced a lack of resource and infrastructure development due to their race and/or economic status (i.e., those in the 9th ward), may qualify as a certain social group. As previously discussed, each applicant is reviewed on a case-by-case basis so applying through means of refugee law, could prove to be a very timely process.

The second method of recourse for ERs would be the development of an Environmentally Based Immigration Visa (EBIV) that would share the cost of supporting ERs among nations (Moberg 2009, 1). As discussed, global warming is increased through greenhouse gas emissions, and the increase of global warming in turn worsens the effects of natural disaster. Moberg suggests that an EBIV system would be similar to a refugee program. However, the majority of the cost would be the responsibility of wealthier nations and predominantly those countries that produce the highest greenhouse gas emissions, not necessarily the host country of the ERs (ibid., 10). The EBIV would be issued both to ERs who have already experienced instantaneous degradation as well as to those facing gradual degradation (ibid., 10). It would be the responsibility of the wealthier, polluting nations to grant the number of EBIVs proportionate to the percentage of emissions that they contribute; thus, the highest emitters would bare the greatest cost (ibid., 10). Overall, an EBIV system would be beneficial as it would:

Provide protection to environmentally displaced people and reduce the harmful effects of climate change by reducing

the number of people dependent upon depreciating land, helping prevent mass migration and, therefore, facilitating environmental sustainability. Alleviating the burden on other countries from further instability and unsustainable environmental circumstances, would further inhibit the expansion of harmful climate change effects and would limit the expense on all nations in the future (Moberg 2009, 10).

An EBIV would be a proactive approach to addressing the issue of gradual degradation as EBIVs could be applied for and granted *prior to* mass displacement. Yet EBIVs would need to be highly regulated and monitored. Similar to refugee programs, an EBIV system would be implemented and regulated via government systems, however the EBIV would be easier to obtain because the criteria would be specific to environmental degradation, and it would not require the ER to prove or obtain refugee or asylum status (ibid.,10). EBIVs would be granted gradually to ensure host countries do not become overwhelmed and to prevent mass migration and thus further environmental degradation (ibid.,10).

In the case of NOLA, an EBIV system would have helped to reduce the chaos in two ways. First, as warnings about the

danger of flooding in NOLA were common knowledge, those that wanted to and were able to could have applied for EBIV status and begun the process of gradual relocation; this would have enabled removal of those ERs out of the immediate flood zones and away from danger. Second, if an EBIV was obtained post Katrina, states would not be allowed to turn away ERs, and as more systems would be in place through means of the EBIV system, the ERs would be able to obtain more assistance with the process of relocation and rebuilding.

The creation of an EBIV system would appear to be the most beneficial. Although there are clauses through which ERs could apply, expansion of the definition and programming of traditional refugee status would be more difficult. Initially the EBIV may be more expensive to implement; however, the EBIV would be more efficient and would serve as a long-term proactive solution for addressing climate change and the needs of ERs before their environment is fully degraded and their livelihoods completely destroyed.

Section 6

CONCLUSION

Currently, there are approximately 25 million environmental refugees. However, it is estimated that by the year 2050 there will be 200 million ERs worldwide (Morton, Boncour and Laczko 2008,6). Many natural disasters that have occurred over the past decade have resulted in the creation of ERs. Recently, Pakistan has been rebuilding after monsoon flooding instantly degraded the northwest corridor of Khyber Province (Doucet 2010, 1). Although a developing nation rather than part of the U.S., Pakistan invokes similarities to New Orleans.

First, the storm that hit the Khyber Province created 400,000 instantaneous ERs and was the "heaviest monsoon flooding since 1929" (Doucet 2010, 1). Second, many of the villages that were hit hardest by the floods were the poorest in the country, and people were forced to live in low-lying flood plains because they had no other option (ibid., 2). Third, evacuation plans were slow to be executed, and as the flooding and rains continued for days, it made rescue difficult. Eventually ERs were able to return to their villages only to find their homes

destroyed, with their drinking water contaminated and livelihoods depleted (IRC 2010, 1).

As issues of environmental refugees will be one of the greatest human crises to face the planet, it is essential that proper protocol and methods of assistance are developed in order to address the rights of the refugees (ibid., 5). As demonstrated by the events in New Orleans, when natural disaster struck and instantaneous degradation occurred, the lack of preparedness led to numerous human rights violations. As Bullard predicts:

Changing climates are expected to raise sea levels, alter precipitation and other weather patterns, threaten human health, and harm fish and many types of eco systems. The adverse effects will fall disproportionately on the poor, including people of color in the United States who are concentrated in Urban Centers in the South, coastal regions, and areas with substandard air quality (2005, 292).

In order for proper ERs protocol to be implemented, more research needs to be conducted. Brown explains that although there has been considerable research conducted on climate change itself,

Much less time and energy, however, have been spent on empirical analysis of the impacts of climate change on human population distribution. Consequently the figures that analysts have produced to date represent little more than well-educated guesswork... the simple fact is that nobody really knows with any degree of precision what climate change will mean for human population distribution (Brown 2008, 8-9).

Credible, evidence-based studies are needed to properly analyze the impacts of climate change on human distribution so that ER policy, plans and protocol can be designed and implemented. As learned from the NOLA case and more recently in Pakistan, human rights may be grossly violated during a time of instantaneous degradation; such as articles 6, 7, 9, 2(2), 11(1) and 12 (1) of the ICCPR and ICESCR respectively. It is important to be proactive with ER systems to ensure human rights are not violated. With concrete data, predicting the impact of an EBIV system would be more conclusive and credible.

Before a system is solidified, it is important that an ER definition is decided on. The definition should expand on current definitions to include the specifics of natural disaster and clarify the difference between gradual degradation and instantaneous degradation. A concise, universal definition would help to further

categorize environmental refugees and determine what type of assistance they need, whether it be immediate or gradual.

Within the environmental justice movement, organizations are lobbying and fighting against environmental injustice. However, that fight does not commonly include the plight of ERs. It is important that the EJ movement begins to recognize ERs as a part of the affected climate change environment. Collectively, the EJ movement will prove to be a vast resource for development of the environmental refugee system and potentially a resource to aid with solidifying and acting on a definition. The EJ movement would also be helpful in conducting and promoting research in an attempt to unify the movement and a course of action. Reform is needed in order to legally recognize ERs and to ensure human rights are protected.

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