

A PERIOD OF CONSEQUENCES:
GLOBAL WARMING, SOCIAL JUSTICE AND A NEW TRANSNATIONAL
ACTIVIST NETWORK

By

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ABSTRACT

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Evidence of the impacts of global warming is accumulating and becoming more specific. Its effects on people, particularly the poor, minorities, indigenous peoples and others living in circumpolar regions, high altitudes, low-lying areas and other vulnerable regions, are becoming more apparent. A climate justice movement has evolved in response to the perceived social justice issues created by the disproportionate impacts of global warming and the resultant climate change on the poor and politically marginalized. This movement can be understood as an example of a new type of transnational, networked social movement that has evolved as part of the anti-neoliberal globalization movement. This project involved the coordination of a panel of climate justice activists who presented at the 2005 Public Interest Environmental Law Conference and the creation of web pages that serve as an educational tool and a directory for the climate justice movement. This project also reviews the relevant literature and discusses the evolution of the climate justice movement and its relationship to other political, environmental and social perspectives.

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PREFACE

It is a beautiful day outside in Arcata, California. As I write this, a gentle breeze carries the scent of summer flowers and green lushness through my open window. The sun is shining, the birds are singing and the temperature is a pleasant 70 degrees. As of today, global warming and climate change have had very little effect on the quality of my life. If anything, perhaps they have brought more sunny warm days like this to northern California, a region characterized as cool, damp and prone to bouts of weeklong rain showers. So far, global warming has not been a problem for me. I do not live with the knowledge that shortly my entire country will be submersed under the rising seas and I will have to find somewhere else to live, a permanent refugee from a place that no longer exists. I have never had a family member fall through melting, thinning shelf ice in the arctic on what was thought to be a safe and permanently frozen seal-hunting trail. I do not live in the shadow of the Himalayas, watching the snowline recede and the glacial lakes swell until they burst through their dams. This is not my life, and these are not my cultures. I come from a place where so far global warming has meant more nice days to spend at the beach.

This raises the question of why I have chosen a master's project that focuses on a problem that for the most part has had negative consequences for people very far from where I sit, people in Pacific islands, the arctic, the Himalayas and other places I have never been. One reason is that I know, eventually, global warming and climate change will come for all of us. Perhaps for the moment it is mainly a problem for people,

particularly indigenous people, in remote regions of the planet, but what is happening there will eventually happen here too. Sea level rise will affect all coastal regions to some degree, and increased storm events, changes in weather patterns, heat waves and drought are all possible consequences of global warming in the United States. It is unfair and not particularly intelligent for us to wait until it happens here to do something about it.

The other and perhaps more important reason that I have chosen this topic is that, although I do not come from a place already significantly impacted, I come from a place and a culture that bears a great deal of responsibility for the problem. The carbon dioxide emissions from the United States far outweigh those of any other country. We drive gigantic cars, use massive amounts of electricity and have a government that still claims to believe that the jury is out on whether human-induced global warming and climate change is really even happening. It is time that we start listening to those who are suffering the consequences of our irresponsibility. I believe that in order for Americans and others from so far minimally affected, over-industrialized countries to make behavioral and political changes to combat the problem of global warming and climate change, we need to fully understand that we are contributing to a problem that is having increasingly devastating effects on real people around the globe. There are millions of lives on the line, and that is something that is difficult to ignore.

I hope that this project will not be construed as an attempt to speak for others. This is not my intention. Those currently affected by global climate change are speaking for themselves, some very loudly. I hope that through this project, I can better

understand their message and help to bring that message to others who need to hear it. There is a quote by an anonymous Native American elder that says: "If you have come here to help me, you are wasting your time....But if you have come because your liberation is bound up with mine, then let us work together." The climate justice network has arisen out of the need for collaboration. Liberation for all of us is bound up in how well we can cooperate to solve this pressing and serious global problem.

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INTRODUCTION

"The era of procrastination, of half measures, of soothing and baffling expedience of delays, is coming to a close. In its place we are entering a period of consequences... This is only the beginning of the reckoning. This only the first sip, the first foretaste, of a bitter cup which will be proffered to us year by year - unless by a supreme recovery of moral health and martial vigor, we rise again and take our stand for freedom."

-Winston Churchill

Importance and Relevance of Climate Justice

In his movie 'An Inconvenient Truth,' politician turned global warming activist Al Gore references the above quote by Winston Churchill. Churchill spoke the words above as the rumblings of the Second World War were beginning to shake the foundations of Europe. Today, in the context of global warming, another international disaster, Churchill's words seem eerily relevant. For years, the world has been concerned about the future impacts of global warming, procrastinating action on a problem that we will leave for later generations to solve. As will be discussed in the following pages, as the impacts of global warming begin to surface and take shape, affecting indigenous peoples, the poor, the elderly and people of color first, we are experiencing the first bitter sip of a problem that will only grow as years pass. The period of procrastination and delay has come to an end, whether we are ready to accept it or not, and we are now entering a period of consequences.

The climate justice movement has evolved in response to the uneven impacts of global warming and impending climate change. The movement is a networked style of social movement that combines environmental concerns with human rights issues. This melding of environmental and social justice issues is representative of a new type of social movement that has arisen in the wake of anti-neoliberal globalization rallies that took place at World Trade Organization and International Monetary Fund summits internationally in the late 1990s. The climate justice movement also shares characteristics with indigenous movements and other movements in which marginalized communities are able to collaborate with international partners to increase awareness of injustices. It is increasingly considered to be a new branch of the environmental justice movement, which is growing beyond its traditional boundaries within the United States as environmental justice problems are increasingly recognized as such internationally.

Jihan Gearon, a member of the Navajo nation who works for the Environmental Justice and Climate Change Initiative says, “Climate change is an environmental justice problem, not just an environmental problem. It is important for people to understand that this is not about ‘wahoo, it’s getting warmer, let’s all go to the beach!’ It is a serious problem that will have significant consequences for all of us, and it is happening now and it is affecting people now” (Gearon, 2005). At a recent conference, Gearon described the plight of those forced to move from their homes in low-lying island states as sea levels rise due to a combination of warming and expanding ocean water and melting glaciers. The indigenous citizens of Tuvalu, an island severely threatened by sea level rise, recently requested (and were denied) Australian citizenship following the submersion of

their lands (Gearon, 2005). It is worth mentioning here that Australia has the highest carbon dioxide emissions per capita and, along with the United States, has refused to sign the Kyoto Protocol (Hamilton, 2003).

Tero Mustonen, a climate justice activist and the founder of the Finland-based SnowChange Organization, which works with arctic indigenous groups to monitor the climatic changes occurring there, discusses how dangerous it has become to hunt on melting ice shelves. Mustonen describes the mounting death toll resulting from increasing numbers of hunters falling through the thinning ice on historically safe trails. Indigenous groups in the arctic are noting changes in species (a sunfish, which is a tropical fish, was recently spotted in arctic waters) and dramatic declines in native species. Polar bears, for example, are also prevented from hunting by unsafe ice shelves and are growing thinner and producing fewer offspring each year (Mustonen, 2005).

Some indigenous groups are also experiencing the loss of culture as a result of climate change. In Nepal, increasing snowmelt that is causing the swelling of glacial lakes is also causing the recession of the snowline and glacial rivers, both of which are culturally significant to the Nepalese (Dhakal, 2003, Sharma, 2005). The Navajo nation in the United States is currently in a battle to protect the San Francisco Peaks, a sacred site for them, from the plans of several ski resorts to make snow from reclaimed sewage water. Ski resorts plan to make the snow because warmer and drier winters are resulting in less snowfall (Maxx-Phillips, 2005). Cora Maxx-Phillips, Assistant to the President of the Navajo nation, said, "As the climate continues to warm and there is less and less snow, how many more mountains will they spray sewage on? This is a sacred site for us,

we believe the air on top of the mountain is life-giving, and this snow-making is destroying that” (Maxx-Phillips, 2005). Changes in traditional and medicinal plants as well as plant and animal extinctions resulting from climate change will also impact indigenous cultures (Gearon, 2005; Maxx-Phillips, 2005).

In an article about global warming and climate change, Tom Goldtooth, Executive Director of the Indigenous Environmental Network, writes, “While environmental degradation in itself is by no means new, throw into this mixture the challenges indigenous communities face socially, culturally, economically and politically, and we're presented with a number of very difficult changes and challenges” (Goldtooth, 2005: 1). Many people think of global warming and climate change as a problem of the future, but the stories and experiences of indigenous peoples and others living in the most vulnerable regions prove that changes are occurring now and with increasing intensity.

Due to their direct dependence on the natural environment for survival and the fact that they are often economically vulnerable, indigenous peoples and others living subsistence lifestyles have been affected first and most intensely by global warming and climate change. It is important to keep in mind, however, that as global warming and climate change progress, they will continue to have particularly negative consequences for the poor, elderly and people of color, as well as non-indigenous people living in vulnerable regions. Consider the poorer communities living on India's low-lying coastline or on small island states (Pelling and Uitto, 2001). Do they have the capacity to relocate or escape the path of increasingly devastating storm events? Where do Pacific islanders go when their countries are submersed by rising sea levels? After a tsunami

struck Sumatra in December of 2004, who were the hardest hit, the people least able to rebuild? As shoreline erosion and inundation continues, what will happen to these people? For those living in the foothills of the Himalayas, what will they do when the dams holding back the swelling glacial lakes finally burst?

To consider an example closer to home, while it is not scientifically sound to claim that Hurricane Katrina was a direct result of global warming, it is likely that category five storms like Katrina will be increasingly common as ocean waters warm and sea level rises (Parmesan and Galbraith, 2004; Intergovernmental Panel on Climate Change [IPCC], 2001). Those unable to flee New Orleans as the storm approached were, for the most part, the poor, elderly and people of color. When an intense heat wave struck Britain in the summer of 2002, the elderly were the hardest hit, as many were not able to survive the unusually high temperatures (Roderick, 2005). It is easy to see how those unable to relocate or who are without the means to pay for air conditioning during a heat wave, or the transportation to escape the path of a hurricane, or the ability to rebuild after a landslide, are likely to be the most impacted as global warming and climate change continue.

Project Description

This project explores the issues of inequity associated with global warming and aims to increase awareness about the injustices of global warming and climate change. This project attempts to describe the climate justice movement that has arisen in response to the disproportionate impacts of global warming and climate change on certain

segments of the global population, identify its components and participants, and serve as a resource for climate justice activists and as a guide to the movement.

This project involved the coordination of a panel of global warming and climate change activists for the 2005 Public Interest Environmental Law Conference (PIELC) in Eugene, Oregon, which is evidenced with the addition of two appendices: an audio recording of the panel and the PowerPoint presentations of two of the presenters, Jihan Gearon of the Environmental Justice and Climate Change Initiative and Tero Mustonen, the director of the SnowChange organization. The coordination of the panel was completed collaboratively as part of an internship with the Center for Environmental Economic Development (CEED). The second project component is a website on the climate justice movement that includes a directory of climate justice organizations and actors. The web address is www.climatejusticenetwork.net. The third project component is a review of the relevant literature and a discussion on the movement and its actors, which makes up the bulk of the following pages.

The literature review consists of five sections, the first on the history of the connections between environmentalism and social justice issues. The second section is a brief overview of the science of climate change, the third is an examination of the disproportionate impacts climate change will have on various regions of the planet and the people who live in the most vulnerable regions, as well as the disproportionate responsibility for the problem and the irony that those least responsible will be most affected. The fourth section details the history of climate change policy and the justice issues that have arisen as negotiations moved forward. The fifth section provides a

discussion of an emerging type of social movement, identified by increasingly transboundary and transnational networking, as well as a return to the grassroots and a direct recognition of the social justice aspects of environmental degradation. A discussion describing the actors in the climate justice movement and the goals and diverse interests that make up the movement follows the literature review.

METHODS

The research for this project was completed through secondary source review and communication with experts in the field. The coordination of the Public Interest Environmental Law Conference panel and the creation of the web pages were completed through an internship with the Center for Environmental Economic Development (CEED) based in Arcata, California.

LITERATURE REVIEW

The following chapter serves as a review of the relevant literature on global warming and climate change, the effects of climate change on different regions and communities, climate change policy negotiations, and network and social movement theory as it relates to the climate justice movement.

Social Justice and Environmentalism

Climate justice is by no means the first movement to address both environmental and social justice concerns, and it can be argued that there are very few, if any, environmental problems without social justice impacts. The following section provides a brief look at the connections between social justice and environmentalism, and an overview of the history of movements built around the social justice consequences of environmental degradation. This section is meant to provide a context for considering the climate justice movement as a new branch of the increasingly international environmental justice movement.

In a publication entitled “The Soul of Environmentalism,” an extended essay on the role of social justice in the environmental movement co-authored by several environmental and social justice activists, the authors write, “Environmentalism, like poetry, has a soul deeper and more eternal than the one described by its examiners. It is a soul tied deeply to human rights and social justice” (Gelobter, et al., 2005: 6). In recent history, it has often been the case that environmental degradation has had the greatest

impacts on those on the margins: racial and ethnic minorities, the poor, and the politically powerless (Dorsey, 2002; Donohoe, 2003). The term “environmental justice” refers specifically to a grassroots movement that emerged in the 1980s in the United States in response to industrial pollution and toxic waste sites that were disproportionately located in poorer communities and communities of color (Environmental Protection Agency [EPA], 2006; Gauna and Foster, 2003; Dorsey, 2002; Schlosberg, 2000).

While the term “environmental justice” has historically been used specifically to describe the struggles of these urban American communities against toxic waste and other forms of pollution, human societies all over the world have dealt with environmental injustices. The environmental movement in India, for example, arguably has its beginnings in the Chipko movement of the 1970s and 1980s. The Chipko movement began when peasants staged a series of direct action protests to protect forest trees from logging. Unlike forest activists in the United States who are concerned with preserving forests for their own innate value, the Chipko movement participants were responding to the unjust exploitation of natural resources previously under the control of local communities by large logging companies. Scholar Ramachandra Guha writes, “The Chipko movement was the forerunner of, and in some cases the direct inspiration for, a series of popular movements in defense of community rights to natural resources” (Guha, 1997:5). Further struggles included the control of forest, pasture, mineral or fish resources, but always centered around the unfair dispossession of local communities as large companies encroached on and decimated their livelihoods (Guha, 1997).

The ongoing struggles of indigenous communities in Latin America against the encroachment of oil companies provide another example of social movements centered around environmental injustice. The U'Wa people of Colombia, to provide one of many examples, battled Occidental Petroleum, the Colombian government and Royal Dutch Shell when plans were made to drill for oil on ancestral U'Wa territory (Wirpsa and Ciriacy-Watrup, 2005). The Western Shoshone tribe of the American southwest continues to fight against the United States government's testing of nuclear weapons on their land. The testing of nuclear weapons produces nuclear radiation that has significant health consequences for all those living within a certain range. Aboriginal Australians and ethnic minorities in Central Asia, the South Pacific and Algeria have also protested the testing of nuclear weapons near their land and homes (Dorsey, 2002).

The above examples are just a few of the many environmental injustices that have occurred and continue to occur worldwide, and are meant to illustrate the history of social justice and environmental problems and the deep connections that exist between the two. In considering the climate justice movement, it is important to understand the history of social justice and environmentalism, and to realize that nearly any environmental problem is also a social justice problem.

As with most forms of environmental degradation, the impacts of global warming are not spread evenly across the global population. Certain segments of the population, particularly indigenous people, the poor, elderly, people of color and those living in especially vulnerable regions are and will continue to be the hardest hit (Miller and Sisco, 2006; Dorsey, 2002). Until recently, the social justice aspects of the global warming

issue have not been a significant focus. The voices of those already impacted by the warming climate have been hard to hear over the cacophony of scientific debate, politics and economic impacts analyses. As global warming progresses, however, its impacts on humans and society are becoming increasingly visible.

The Science of Global Warming

Research and Data

While climate science and the study of global warming and climate change is complicated and technical, the following provides a brief overview of the basics of the science of global warming and climate change and human influences on current warming and climatic changes.

Global warming is the result of the release of greenhouse (heat-trapping) gases into the atmosphere. Carbon dioxide is a greenhouse gas, meaning that when it is released into the atmosphere, it traps radiant heat from the sun reflecting off of the surface of the earth. The higher the concentration of carbon dioxide and other greenhouse gases (GHGs) in the atmosphere, the warmer the planet is. Human activities, such as driving automobiles and the generation of electricity, are increasing the level of atmospheric greenhouse gases through the burning of fossil fuels.

Currently, about 80% of the world's human produced primary energy is generated via the burning of fossil fuels such as coal, oil and natural gas (Hassol, 2004). The process of deforestation is also decreasing the amount of carbon dioxide absorbed

through photosynthesis. The increase in GHGs and the resulting warming of the planet are expected to cause global climatic changes that will have significant and dangerous consequences worldwide (IPCC, 2001; IPCC, 2007). Increases in GHGs have a cumulative effect over time, and the increased concentrations are already having negative consequences for people, particularly indigenous people, living in vulnerable areas such as circumpolar regions, high altitudes and low-lying coastal zones (Thomson, 1997; Vanderheiden, 2004).

In 1958, Dr. Charles Keeling began monitoring atmospheric carbon dioxide at Mauna Loa Observatory in Hawaii. Keeling's measurements constitute the longest continuous record of atmospheric carbon dioxide concentrations to date. His work clearly shows a steady increase in carbon dioxide levels since 1958, and is evidenced by the well-known "Keeling curve" (Fig 1.) Keeling's data shows an increase from around 315 parts per million by volume (ppm) of atmospheric carbon dioxide in 1958 to over 375 ppm in the year 2003. The small oscillations on the graph show seasonal changes in atmospheric carbon dioxide levels due to increases and decreases in photosynthesis (Keeling and Whorf, 2004).

Data from ice core samples also show a dramatic and rapid increase in atmospheric carbon dioxide beginning in the early 1800's, around the start of the industrial revolution. The ice core data shows a fairly steady atmospheric carbon dioxide concentration of about 275 ppm until the year 1800, where it begins to increase to its present level of near 380 ppm (Vanderheiden, 2004). Surface temperatures of the earth have also increased since the industrial revolution, indicating a correlation between

increased greenhouse gas concentrations in the atmosphere and a warming of the earth (Fig. 2) (IPCC, 2001; Dole, et al., 2003).

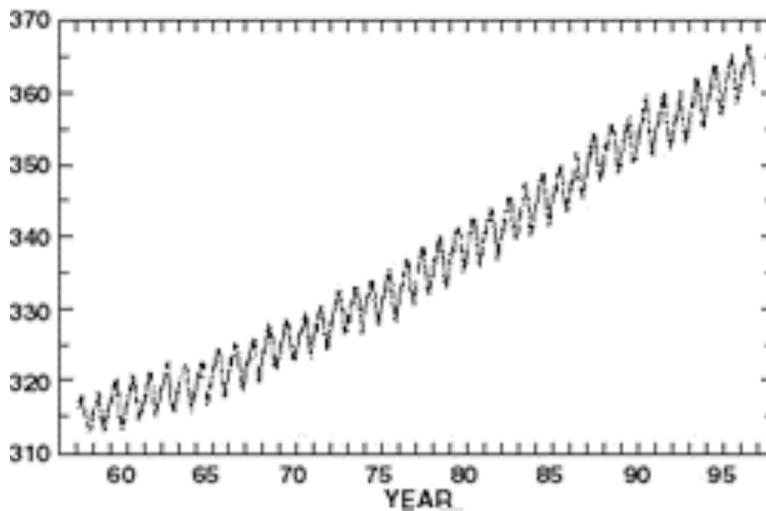


Figure 1 Keeling Curve showing increases in atmospheric carbon dioxide (Keeling and Whorf, 2004).

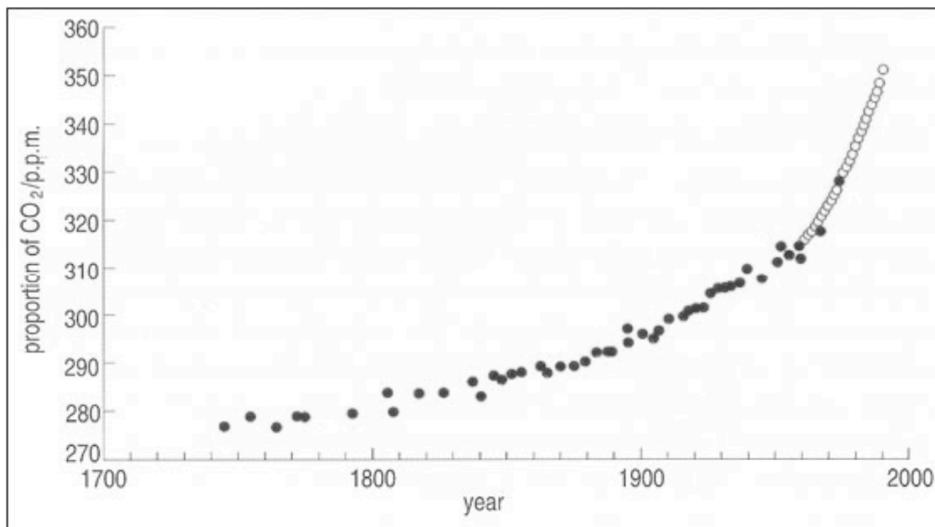


Figure 2 Ice core data showing increasing atmospheric carbon dioxide (Open University, 2007)

Anthropogenic Warming

Debates about the science of climate change may continue, but as global warming and climate change cease to be a problem of the future and become a problem of the present, it becomes more and more difficult to deny its existence. Variations in greenhouse gas levels in the atmosphere and periodic warming and cooling of the earth's surface is natural, as evidenced by a long history of ice ages and interglacial periods (Keeling, 1997). The relevant question now, in the face of obvious climatic change occurring, is not 'is climate change happening?,' but- 'how much of climate change is human-induced?'

In a study by Naomi Oreskes, 928 peer-reviewed papers published by climate scientists between 1993 and 2003 were analyzed, and not one of them dissented from the consensus that anthropogenic climate change is occurring. Oreskes points out that although confusion and disagreement over the reality of anthropogenic climate change may be the impression conveyed to the public through the media and politicians, this impression is false (Oreskes, 2004). The recently released Arctic Climate Impact Assessment states that "there is international scientific consensus that most of the warming observed over the last 50 years is attributable to human activities" (Hassol, 2004: 8). The summary of the fourth Intergovernmental Panel on Climate Change (IPCC) Assessment report (the full report has not yet been released as of the writing of this text) states that "most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic

greenhouse gas concentrations” (IPCC 2007: 10). The fourth IPCC Assessment Report summary goes on to say that it is “extremely unlikely” that warming within the past fifty years can be explained without anthropogenic emissions of greenhouse gases, and that observed levels of warming over the past fifty years can only be simulated by models that include anthropogenic forcing (IPCC, 2007: 10-11) (Fig 3).

While some of the current warming may be natural (although some climate scientists have concluded that without anthropogenic warming the earth would actually be in a slight cooling trend), research has indicated that anthropogenic emissions of carbon dioxide and other greenhouse gases since the industrial revolution are accelerating any natural warming at an alarming rate (Pearce, 2005; Vanderheiden, 2004, Dole, et al., 2003). If no action is taken, it is predicted that average global surface temperatures could rise as much as 6 degrees Celsius above pre-industrial levels by the year 2100. The projected increases in carbon concentrations in the atmosphere and the resulting rapid increases in global temperature are unprecedented in over ten thousand years (Vanderheiden, 2004).

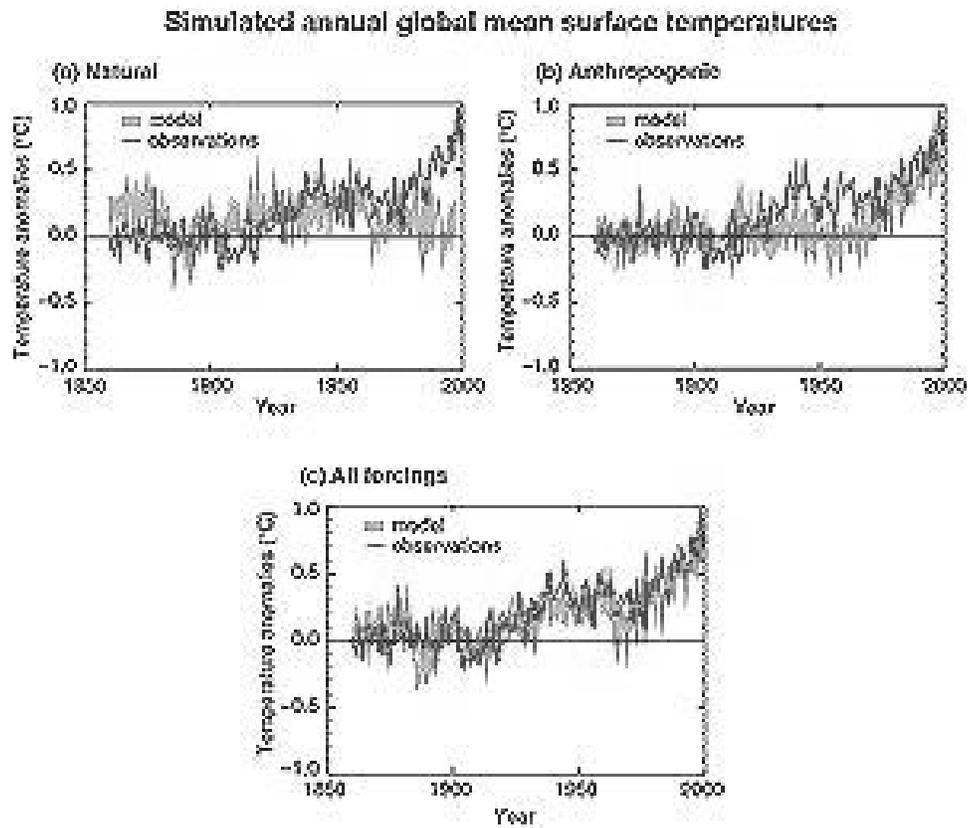


Figure 3 Graphs showing model and observed temperature variation assuming natural, anthropogenic and both natural and anthropogenic warming. The graph that includes both natural and anthropogenic warming appears to be the most similar to observed temperature trends since the industrial revolution (Dole, et al., 2003: 3).

Disproportionate Impacts and Responsibility

Regional Impacts

Global warming and climate change are expected to have wide-ranging impacts including sea level rise, changes in atmospheric and oceanic currents and circulation patterns, increases in pests and vector-borne diseases, increasingly severe storm events and shifts in precipitation patterns that could lead to droughts and flooding (IPCC, 2001; IPCC 2007). Some regions of the world are more exposed to the possible consequences of climate change than others. Perhaps the two regions of the planet most vulnerable to devastating impacts of global warming are low-lying islands in the South Pacific and circumpolar, arctic regions.

Island states are among the poorest and least developed countries in the world, and their responsibility for greenhouse gas emissions is negligible (Hamilton, 2003). However, they constitute the group of countries most vulnerable to the adverse effects of climate change. For island states, particularly the small and low-lying islands of the Indian Ocean and South Pacific, global warming is an environmental problem of cataclysmic proportions. The Maldives, Tuvalu, the Bahamas, the Marshall Islands and Kiribati face the possibility of complete or nearly complete submersion by the end of the century (IPCC, 2001; Hamilton, 2003).

Increased intense storm events will likely batter the already storm-prone islands and lead to coastal erosion (Pelling and Uitto, 2001). Sea level rise will result in possible submersion, further accelerate coastal erosion and also lead to salt water infiltration into

groundwater. Salt-water intrusion will decrease the supply of drinking water (already low on many islands) and is expected to have significant impacts on crop yields (Hamilton, 2003). Sea level rise also threatens the already fragile economic systems of island states because they are based mostly on coastal activities such as fishing and tourism (IPCC, 2001). Like other developing countries, islands will also be vulnerable to species loss. It is estimated that 30% of threatened plant species and 23% of threatened birds are endemic to vulnerable island nations, and climate change will likely mean the extinction of many of these species. Warming ocean temperatures as a result of global warming are expected to cause coral reef deterioration, which would result in more species loss and ecosystem changes and would also impact the tourism and fishing industries of many island states. Island states are also susceptible to the adverse impacts on agriculture and increased vector-borne disease that all regions with warm climates are subject to (IPCC, 2001; Hamilton, 2003).

Waiting for scientific proof beyond the shadow of a doubt, as advocated by some developed countries such as the United States and Australia, the two countries with the highest per capita emissions, is an absurd proposition for island states. Eric Shibuya describes the “apocalyptic urgency” felt by island states on the global warming and climate change issue, and quotes island delegates as saying, “We don’t have time to wait for conclusive proof. The proof, we fear, may kill us” (Shibuya, 1997: 548). Similar to island states, countries with low-lying coastlines like India and China are also vulnerable to coastal submersion and erosion, salt-water intrusion and increasingly severe storm events.

As climate change continues, warmer, tropical regions and deserts, where crops are already close to their thermal thresholds, will likely experience crop failure, droughts and increasing desertification (Smith, 2003; IPCC, 2001). Regions at high altitudes are also at risk. In Nepal, where the average temperature has been rising 0.5 degrees per decade, increasingly rapid snowmelt from the Himalayas has caused glacial lakes to swell, and the dams that contain them are expected to burst at any time, triggering flash floods that could wash away large portions of the country (Sharma, 2005; Dhakal 2003).

The arctic is a region of the world that is particularly vulnerable to global warming. According to the Arctic Climate Impact Assessment, “arctic average temperature has risen at twice the rate of the rest of the world in the past few decades” (Hassol, 2004:14). This rapid warming is having and will continue to have devastating impacts. Reduction in sea ice could mean extinction for species like the polar bear, ice-inhabiting seals and some seabirds, which depend on sea ice for hunting, birthing young and nesting. Summer sea ice has declined 15-20% over the past 30 years, and is expected to accelerate and lead to near total loss of summer sea ice by the end of the century. Other species like caribou will be increasingly stressed as access to food sources and migration routes change or disappear. Warming in the arctic may also lead to increases in insect pests and vector borne disease, more forest fires and the introduction of non-native invasive species as the arctic becomes suitable habitat for currently non-arctic species, further changing the ecosystem and increasing pressure on arctic species (Hassol, 2004).

Species loss and changes in availability of species is affecting indigenous peoples in the arctic who depend on these threatened animals as a food source. Traditionally safe hunting trails and fishing areas are becoming hazardous as ice melts and thins, and increasing storms and warmer, shorter winters are also posing serious challenges to indigenous arctic peoples (Mustonen, 2005; Hassol, 2004). Thawing permafrost is beginning to have consequences for arctic populations at large as well, causing the destabilization of roads, buildings, pipelines and airports. Permafrost melting is also having other serious consequences like ground surface collapse and lake drainage (Hassol, 2004).

Perhaps most alarming, warming in the arctic will impact the rest of the planet. As the massive and highly reflective arctic glaciers melt, they will expose the much darker and less reflective land and water beneath. This will increase absorption of heat from the sun and further increase warming worldwide. The melting of land-based glaciers in the arctic will also add to sea level rise as ice slides into the ocean, and increases in glacial melt and river runoff add freshwater to the ocean, which may result in the slowing or even ceasing of certain ocean currents, which will effect the climate on a global scale, causing rapid cooling in some regions as warm water currents moving northward from the tropics shut down (Hassol, 2004).

With the exception of some circumpolar regions like Finland, Norway and northern Canada, the parts of the world most sensitive to climate change (low-lying coastal areas, high altitudes, islands, tropical regions and deserts) are also the poorest parts of the world. Climate models have indicated that the most adverse effects of

climate change are likely to occur in developing nations (Viguier, 2004; Beg, Morlot and Davidson, et al., 2002). The vulnerability of developing countries to climate change is exacerbated by the fact that most depend on environmental industries such as agriculture, which will be significantly affected by a changing climate. In Africa and Latin America, for example, climate models project up to a thirty per cent reduction in agricultural productivity over the next century (Beg, et al, 2002).

In addition, developing countries have the least adaptive capacity for responding to climatic changes. Smith, Klein and Huq (2003: 2) define adaptive capacity as “the ability of a system to adapt to climate change, reduce adverse effects or take advantage of beneficial effects.” Developing countries have less access to technology and funding and also often have less institutional capacity. This means that resources for responding to rising health problems, economic losses, crop failure, natural catastrophes, ecosystem instability and other adverse consequences of climate change are limited (Smith, et al., 2003; Beg, et al., 2002).

Even though the initial and most devastating impacts will likely occur in developing regions, industrialized countries are not without concern. Thermal expansion of ocean waters (warmer water expands and takes up more space) and rapid melting of glaciers, snowpack and sea ice will affect arctic regions and low-lying islands first, but all coastal regions are at risk. Sea level has risen .17 meters (about 6 inches) in the 20th century and it is predicted that sea levels will rise at least 3 feet over the next century (IPCC, 2007). It is possible that increasingly rapid melting could lead to a dramatically accelerated break-up of large ice sheets in the arctic, such as the Greenland ice sheet,

which could raise sea level as much as 23 feet over the next century (Dowdeswell, 2006; Rignot and Kanagaratnam, 2006; Hansen, 2006). If that happens, most coastal cities, including Manhattan, San Francisco, Miami and other U.S. cities, would be partially or completely submersed. Nearly the entire state of Florida would be submersed (Hansen, 2006). Aside from submersion, sea level rise will also result in salt-water intrusion into groundwater, impacting the drinking water supplies of most coastal regions.

Increasingly severe storm events caused by warming ocean waters will also impact the southern regions of the United States. Temperatures in the United States have already increased by 0.8 degrees Celsius on average over the past decade, and precipitation has increased 5-10 percent on average, with rain and snow falling less often but in more extreme events in the eastern United States (Parmesan and Galbraith, 2004). Desertification in the western United States is expected to accelerate and continue as mountain snowpack levels decrease and precipitation patterns change, and heat waves and forest fires are predicted to intensify as temperatures increase. These changes are already beginning to stress plant and animal species, causing range shifts and population decreases across the country (Service, 2004; Parmesan and Galbraith, 2004).

Responsibility

The irony of the disproportionate sensitivity of developing states to climate change is that, historically, developed countries are responsible for far more global greenhouse gas emissions than developing countries (Rahan, 1997). Developing countries combined currently account for approximately 30% of global greenhouse gas

emissions, while the United States alone is responsible for 25% of emissions (Viguiet, 2004; Kulkarni, 2003; Cao, 2003). Developed countries have also been responsible for emissions for a longer period of time than developing states. Carbon dioxide remains in the atmosphere for 140 years, and greenhouse gases released during the industrial revolution, long before developing countries began to industrialize, are still trapping heat in the atmosphere today (Vanderheiden, 2004).

International Climate Change Policy Negotiations

Initial Negotiations

The widespread responsibility for climate change, as well as its obviously global implications, has resulted in global policy initiatives. Intergovernmental talks, conferences, panels, meetings and summits on climate change have been occurring since the First World Climate Conference was held in 1979 in Geneva, Switzerland. At the conference, the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) created the World Climate Program, which was designed to assess human impacts on the global climate. The First World Climate Conference sparked a substantial increase in climate change science research, which eventually led to attempts at global policy-making (Rahan, 1997; United Nations, 2006). In 1988, the Intergovernmental Panel on Climate Change (IPCC) was established in response to growing global concern about global warming and climate change (Hulme and Turnpenny, 2004).

The IPCC consists of three working groups assigned to research the science of global warming, the impacts of global warming, and possible mitigation strategies (Rahan, 1997). The first assessment report of the IPCC was presented at the Second World Climate Conference in 1990 (Hulme and Turnpenny, 2004; Rahan, 1997). Since then, two more IPCC reports have been released, the most recent in 2001. The IPCC has found that climate change is occurring, and that it will likely have significant impacts on the environment and on society. The IPCC has proposed that adaptation to a changing climate and the stabilization of atmospheric greenhouse gases are necessary responses to climate change (IPCC, 2001).

In 1990, the United Nations approved the start of climate change treaty negotiations and created the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC called for the stabilization of greenhouse gases at a level that would prevent changes in the climate system, and also proposed a ‘common but differentiated responsibility’ regime, in which developed countries would be responsible for helping developing countries reduce emissions. The UNFCCC was drafted in time for the Rio Earth Summit in 1992 and was later signed by 186 countries (Jacoby and Reiner, 2001; Yokota, 1999). The Rio Earth Summit was the first global conference on the environment that allowed non-state actors such as NGOs, businesses and individual experts to participate in policymaking decisions, and was significant in shaping the structure of future climate change policy negotiations (Yokota, 1999). The first Conference of Parties of the UNFCCC (COP-1) was held in Berlin in 1995 (Jacoby and Reiner, 2001; Hulme and Turnpenny, 2004).

The Kyoto Protocol

After years of negotiations, a global climate treaty finally came to fruition in 1997 with the negotiation of the Kyoto Protocol at the COP-3 Kyoto Conference on Climate Change, although a final agreement on contents of the Kyoto Protocol would not occur until 2001 (United Nations, 1997; Rahan, 1997; Hulme and Turnpenny, 2004; Yokota, 1999). The Kyoto Protocol requires ratifying developed countries to reduce greenhouse gas emissions by 5-8% (for example, 6% reductions for Japan, 7% for the United States and 8% for the European Union) based on 1990 levels between 2008 and 2013.

Studies have indicated that stabilizing greenhouse gas emissions at existing levels would require immediate reductions of about 70%, but 5-8% reductions by 2013 are what the UNFCCC participants deemed to be reasonable goals given the economic, structural and political issues involved. Developing countries are exempt from binding emissions reductions under the principle of common but differentiated responsibility, although they are expected to make efforts to reduce their greenhouse gas emissions. Common but differentiated responsibility indicates that while all countries are responsible for greenhouse gas emissions, some are responsible for more emissions than others and so should be required to reduce their emissions more (United Nations, 1997; Rahan, 1997; Wohlgemuth and Missfeldt, 2000; Yokota, 1999).

To facilitate compliance with binding emissions reduction obligations, the Kyoto Protocol provides three market-based flexibility mechanisms to assist ratifying countries in reaching their targets. The mechanisms are International Emissions Trading,

colloquially known as “carbon trading,” Joint Implementation and the Clean Development Mechanism. Emissions Trading, which is articulated in Article 17 of the Kyoto Protocol, allows a country that has reached its emissions reduction target to sell “excess” emissions reductions to other countries. Under Joint Implementation, Article 6 of the Kyoto Protocol, Annex I countries (that is, ratifying industrialized countries) may work together to meet emissions targets by implementing projects in other Annex I countries and receive emissions reduction credit for those projects (United Nations, 1997). The Clean Development Mechanism (CDM) is similar to Joint Implementation except that Annex I countries receive credit for projects implemented in non-Annex I (that is, developing) countries. Under the CDM, developed countries receive credit for emissions reductions in developing countries, while developing countries receive funding and technology transfer (Wohlgemuth and Missfeldt, 2000; United Nations, 1997).

The United States and likeminded countries have cited “insufficient scientific proof” of climate change, and claim that until there is proof, it is not worth investing in reduced emissions (Brandt and Svendsen, 2002; Roddick, 1997). The European Union, on the other hand, has adopted the precautionary principle when it comes to climate change. The European Union and likeminded countries make the case that it is much worse to wait for scientific proof and find out the hard way than it is to work toward reducing emissions now. It is the case that emissions in the European Union have not increased much over the past few decades, and reducing emissions below 1990 levels would have little negative economic impacts. In the United States, however, reducing

emissions below 1990 levels would require a great deal of financial investment (Biermann, 2001).

The United States and European Union also disagree on the principle of common but differentiated responsibility, with the European Union supportive and the United States against. The conflicts between the United States and the European Union have been significant sticking points for policy negotiations and were partially responsible for the failure of talks at the COP-6 in The Hague and the eventual retreat of the United States from the Kyoto Protocol (Brandt and Svendsen, 2002; Jacoby and Reiner, 2001; Roddick, 1997).

In 1997, as the final negotiations on the Kyoto Protocol were taking place, the United States Senate unanimously passed the Byrd-Hagel resolution in a 95-0 vote. The Byrd-Hagel resolution opposed any climate treaty that would hurt the U.S. economy or exempt developing countries from binding emissions reduction obligations. The Byrd-Hagel resolution was followed by the election of President George W. Bush in 2000, who was hostile to the Kyoto Protocol. By the COP-6 in 2000, it had become clear that the financial costs of climate change mitigation would be much higher for the United States than had been estimated in 1997. In 2001, the United States announced that it would not ratify the Kyoto Protocol. Australia, which has the highest per capita greenhouse gas emissions in the world, echoes the sentiments of the United States, asserting it will not agree to any global policy that will negatively impact its economy. Australia has also not yet ratified the Kyoto Protocol (Hamilton, 2003).

The Kyoto Protocol must be ratified by 55 countries and must include countries representing 55% of Annex I emissions. Without the United States, meeting this requirement was considered nearly impossible (Jacoby and Reiner, 2001). Negotiations moved on without the United States, however. In 2002, Japan, Canada and the European Union ratified the Kyoto Protocol, bringing it close to the 55% requirement. In November of 2004, Russia finally ratified the Protocol, meeting the 55% requirement and allowing it to officially go into force in February of 2005 (United Nations, 2004).

As previously indicated, developed countries are less vulnerable to the impacts of climate change than developing countries. For this reason, developed countries in general have less to gain by investing in reduced emissions. Naturally, countries with stabilizing or already declining emissions, such as the European Union member states, are more amenable to emissions reduction obligations than those with steadily increasing emissions, such as the United States (Rahan, 1997; Biermann, 2001). The market-based flexibility mechanisms of the Kyoto Protocol are an attempt to balance the costs of mitigation. The 5-8% reduction goal is a reflection of ambivalent commitments on the part of some developed countries, and not an actual inability to meet higher targets (Brandt and Svendsen, 2002).

Developing Countries and Policy Negotiations

Despite the fact that the developing countries will be most affected by climate change, developed countries have dominated climate change negotiations. Developed countries have more experts with higher levels of scientific knowledge than developing

countries, and a higher agenda-building capacity. They are more stable financially and can afford to send more delegates to conferences. Developing states lack equal access to the resources, funding and information that would allow them to participate meaningfully in climate change policy negotiations. The smaller and poorer a country, the less able it will be to participate (Rahan, 1997).

Developed states have realized that developing country participation is necessary for successful negotiations, and actions have been taken to remedy the uneven resources problem, such as the creation of funds to enable delegates from developing states to attend conferences. However, participation by developing countries is still much lower than that of their developed counterparts. Lower expertise and limited agenda-building capacity still restricts the influence developing countries have on policy negotiations, even if their representation is increased (Biermann, 2001; Roddick, 1997; Rahan, 1997). Developing countries also do not consider themselves responsible for the problem of climate change, and have limited funding and resources available for mitigation. For these reasons, developing countries tend to prioritize other issues over climate change, which limits their participation further (Biermann, 2001; Beg, et al., 2002; Kulkarni, 2003).

In general, the problem of climate change has been a low priority for many developing countries, with the exception of island states and some other countries with much to lose if climate change continues. Biermann (2001) notes that issue prominence for climate change in India has been fairly low because it is considered a “problem of the rich” with no real place on the Indian national policy agenda. This is partially related to

the question of responsibility, since many developed countries consider climate change to be a problem caused by industrialized countries. Perhaps more importantly, climate change is a low priority for developing countries because scarce economic resources are considered better spent on poverty alleviation and economic development. Development is often assumed to directly conflict with climate change mitigation because rapidly developing countries are pressured to find the quickest, cheapest ways to stimulate economic growth and reduce poverty (Viguier, 2004; Cao, 2003). This usually means building an energy infrastructure in the form of coal fired power plants, which emit large amounts of carbon dioxide. If developing countries continue down the path of traditional, fossil fuel driven development, their emissions will quickly surpass those of developed countries (Viguier, 2004).

Land use changes, such as deforestation for agriculture, are also fairly prevalent in developing countries because they are generally more dependent on land-based industries for economic growth than developed countries. Since their economies are tied to these industries, mitigation strategies for climate change involving limiting land use changes are difficult to implement. The need for economic growth is a driving force in most developing countries, and climate change mitigation strategies that conflict with development needs are unlikely to be pursued. Since climate change is not yet dramatically affecting most developing countries, they are not yet willing to allocate scarce resources toward mitigation. This is particularly true for oil producing countries, whose economies would be impacted by climate change mitigation (Beg, et al., 2002; Rahan 1997).

Larger and relatively economically stable developing countries, such as China, India and Brazil, have managed to leverage some power throughout negotiations, as evidenced by the common but differentiated principle discussed previously in this section. These countries realized that if they did not participate in the process of policy negotiations, their views would not be considered and they would be forced to comply with the policy created by developed countries. Over the course of years and after much controversy, common but differentiated responsibility has been accepted by most developed countries, particularly the European Union, although it is still rejected by some, including the United States (Rahan, 1997; Biermann, 2002; Kulkarni, 2003).

Throughout the history of intergovernmental climate change negotiations, developing countries have contended that they are not equally responsible for global greenhouse gas emissions, and so should not be expected to fund mitigation strategies. They have also pointed out that they are still in the process of developing, and require increased energy consumption in order to meet the basic needs of their people. Additionally, developing countries have consistently maintained that they do not have the adequate economic or technological capacity to participate in climate change mitigation. For these reasons, it would be unfair for developing countries to be required to commit to emissions reduction obligations, as developed countries are required to under the Kyoto Protocol (United Nations, 1997; Rahan, 1997; Kulkarni, 2003; Vanderheiden, 2004).

In response to these issues, developing countries proposed that the principle of common but differentiated responsibility guide climate change mitigation strategies. In the case of climate change, the common but differentiated responsibility principle dictates

that all states have a responsibility to protect and preserve the earth's ecosystems, but that it is also the responsibility of developed countries to help developing countries meet this goal. This means that developed countries should assist developing countries by providing funding and technology transfer for climate change mitigation. Common but differentiated responsibility was first instituted in Agenda 21 of the 1992 Rio Declaration, which stated that the inflow of funding and technology to developing countries was a necessary component of a global climate change policy (United Nations, 1992). As mentioned above, the CDM of the Kyoto Protocol is an attempt to put the principle into practice (United Nations, 1997; Viguier, 2004; Rahan, 1997).

Recent Social Movements and Anti-Neoliberal Globalization

Recent Social Movements

Social movements are types of collective action characterized by a network structure linking multiple actors. A network is a set of nodes linked by a certain set of relationships and criteria. "Nodes," or actors, in a social movement network can be individuals, organizations, specific regions, states or even events, such as protests or conferences. While there is a long history of research on social movements and their variations throughout history, the relationships between networks and social movements and the role of networks in transnational collective action have recently become significant areas of interest for social scientists (Diani, 2003, Guidry, Kennedy and Zald, 2000; Keck and Sikkink, 2000, Seidman, 2000). While transnational networks have been

the structural bases for many social movements in the past, as Keck and Sikkink show through an analysis of the antislavery and women's suffrage movements, social theorists describe a new brand of transnational, network-based social movement emerging in the current rapidly globalizing era (Keck and Sikkink, 2000; Guidry, et al., 2000, Seidman, 2000).

Immanuel Wallerstein describes the history and evolution of what he refers to as "anti-systemic movements," which are those movements that have arisen in opposition to national and international political, economic and social systems. These anti-systemic movements of the 19th and 20th centuries paved the way for the new transnational social movements currently emerging. According to Wallerstein, anti-systemic movements originated in the 1850's with the struggles of trade unions and socialist parties to challenge the ruling elite and with various nationalist movements fighting for change in their countries between 1850 and the 1970s. In the 1970s New Social Movements (NSMs) began to emerge. The NSM's include the environmental movement, feminist movement and the movements of racial and ethnic minorities. In the 1980s, these were joined by various human rights organizations, although some organizations, such as Amnesty International, were already well established by this time (Wallerstein, 2004).

These new international, networked social movements were larger, more complex and involved increasing numbers of diverse actors than their historical precursors (Escobar, 2000; Khagram, Riker and Sikkink, 2004; Keck and Sikkink, 1998; Wirpsa and Ciriacy-Watrup, 2005; Castells, 1996). Arturo Escobar concisely describes recent social movements as extremely pluralistic, operating on scales from the local to the global,

decentralized, and without common demands (Escobar, 2000). Activist groups have begun to work cooperatively and expand to incorporate a wide variety of interests. Michael Hardt writes that “the movements...function rather like a public sphere in the sense that they can allow full expression of differences within the common context of open exchange” (Hardt, 2004: 236).

Although the social movement organizations (SMOs) that comprise these current social movements are often very different and have a wide variety of individual goals, they have a strong common interest that ties them together: protecting the environment, promoting women’s rights or ensuring justice for minorities and marginalized groups. Wallerstein argues that the modern world-system is in a “structural crisis,” and that we are in an “age of transition” when issues now confronting anti-systemic movements are different than those of 19th and 20th centuries and require new and collaborative approaches (Wallerstein, 2004: 271).

A Transnational Uprising

In the 1990s, a new and different type of anti-systemic movement emerged. This movement, often referred to as the anti-globalization movement, has evolved in opposition to neoliberal advocates of a globalized system of free-trade in goods and capital (Wallerstein, 2004). Throughout the remainder of this text, the term “anti-*neoliberal* globalization movement” will be used. This is appropriate here because this movement is not actually anti-globalization, as transnational networking and collaboration are a part of the movement’s strategy. Globalization has brought many

activist organizations together and created a “transnational public sphere” that has allowed for national organizations to forge international partnerships that result in action across borders (Guidry, et al., 2003: 3; Keck and Sikkink, 1998). Instead, the anti-neoliberal globalization movement opposes the neoliberal style of globalization that it perceives to be the most pervasive.

Neoliberal globalization has been advanced internationally via multinational corporations, the International Monetary Fund (IMF) and a strengthening of the World Trade Organization (WTO), as well as the continued activity of the World Bank and other international development banks. The increased influence these international economic institutions are perceived to have on national and international policy has led to a growing lack of trust in government and frustration with what can be described as global regulatory capture, meaning government regulations are dominated by industry and corporations rather than public interest (Wallerstein, 2004; Seidman, 2000; Levine and Forrence, 1991). This frustration reached a boiling point with a series of international protests during the late 1990s, including the dramatic and well-publicized protest at a ministerial meeting of the WTO in Seattle in 1999 that succeeded in shutting down negotiations (Bennett, 2001; O’Neill and Vendeveer; Kavada, 2003; Kahgram, et al., 2002). The protests were composed of a broad range of NSM transnational advocacy groups, including feminist groups, environmentalists and trade unionists (Khagram, et al., 2002; Wallerstein, 2004). Considered by many scholars to be the resounding entrance of the anti-neoliberal globalization movement into public consciousness, the original

protests were followed by demonstrations “at almost every summit of transnational economic organization or major political power” (Kavada, 2004: 2).

The continuation of international protests led to the creation of the large, decentralized and diverse World Social Forum (WSF) in 2001. The WSF seeks to bring together various types of movements: trade unionists, feminists, human rights advocates, environmentalists and others, and includes groups organized into local, regional, national and transnational, with the common objective of struggling against the social and environmental problems that are the consequence of neoliberalism. The WSF, which has been held in Porto Alegre and Rio de Janeiro and drawn an impressive 80,000 participants, brings together the North and South within single framework and is run by an international coordinating committee of 50 delegates representing a variety of movements and regions (Wallerstein, 2004; Hardt, 2004).

Prior to the late 1990s and the emergence of the anti-neoliberal globalization movement, international environmental NGO activity had increasingly become connected with the U.N. and other international policy negotiation arenas, and had lost touch with its grassroots citizen base. The authors of “The Soul of Environmentalism” point out that both social justice and environmental movements had moved away from their grassroots beginnings and were not spending as much time on the ground with the people for whom they were presumably working. Gelobter, et al. note that “whenever a movement spends more energy and money on winning in court than it does on winning in the streets, it speeds its own demise.” They continue that in order for movements to be successful, they “have to reach people in their souls” (Gelobter, et al., 2005: 13-14). While litigation

can be an important part of a movement, critics might argue, it should not replace the grassroots.

Lance Bennett explains that the decentralized network structure of the anti-globalization movement has arisen partly in response to an increasing public perception that government can no longer be trusted to adequately respond to social and environmental problems due to political pressure from powerful “multinational economic regimes,” such as the WTO, the IMF and the World Bank, as well as multinational corporations. Networking and coalition-building is often considered to be the only way to create strong enough movements to counter the perceived strangle-hold industry has on policy making, and so more activists are gravitating toward a networked style of resistance (Bennett, 2001).

NGOs were criticized for behaving more like adjuncts of the state and government, rather than opponents. NGOs developed as agents of NSMs were increasingly working in core regions, even while trying to implement policies in the periphery (Wallerstein, 2004). The importance the international environmental NGOs had been placing on “Northern” concerns (for example, nature preservation) tended to ignore or sideline the concerns of developing countries, indigenous peoples, poor communities and other marginalized groups (O’Neill and Vandever, 2005). Similar to nature preservation, before the anti-neoliberal globalization protests, the problem of global warming and climate change was seen by the global public as a problem of the rich and a concern of elite environmental groups dominated by North American and Northern European concerns (Rahan, 1997). O’Neill and Vandever use the pre-protest

environmental movements surrounding global warming and nature preservation as examples of the elitism of transnational environmental NGOs (O'Neill and Vandever, 2005). Although both climate change and nature preservation have deep connections with human rights issues, the justice aspects of both had been ignored for the most part by the environmental movement.

Scholars observe that following the world-wide anti-neoliberal globalization protests, international environmental NGOs began to respond to these criticisms of elitism. Environmental NGOs began to make attempts to broaden their bases and diversify their interests. This reframing of international environmentalism led to an increasing focus on environmental justice and a linking with the global justice aspects of environmental problems. As a result, participation in transnational environmental debates is expanding beyond North America and Northern Europe and leading to increasing diversity in environmental activism and a reconnection with the grassroots (O'Neill and Vandever, 2005; Bennett, 2001; Langman and Morris, 2003; Schlosberg, 2000).

The Internet

Assisting in the shift toward a broader and more inclusive transnational environmentalism is the Internet. Networks have become the central organizing principle for activism due in part to the advent of the Internet, which has increased the capacity for transnational communication and fostered international coalition-building. With the help of the Internet, environmental groups have been able to work cooperatively to form

transnational networks of resistance (Kavada, 2004; Bennett, 2001; Langman and Morris, 2003). Although it is recognized that not all marginalized groups have equal access to the Internet, it can also be a helpful tool for some groups with minimal political profiles because it is widely accessible and can be an inexpensive way to increase the visibility of a problem and to network with larger, politically powerful SMOs (Gmelch, Daniels and Ramira, et al., 2001).

The Internet has served as a powerful tool for indigenous groups seeking to increase public awareness about a variety of injustices, including global warming and climate change, and to build partnerships with international human rights organizations. The literature on indigenous movements often discusses the role that networking has played in helping them to overcome scale constraints and marginalization. Through networking, indigenous groups can partner with larger, more powerful NGOs and state actors. Networks have become central to contemporary forms of indigenous political mobilization, and transnational networks have helped them strengthen their political voice (Perreault, 2003; Gmelch, et al., 2001).

Despite the benefits the Internet has provided for SMOs, it is also important to recognize that the multinational corporations and economic structures that the anti-neoliberal globalization movement opposes have used the Internet and other modern technologies to their great advantage. Castells describes how new technologies have increased the networking abilities and power of multinational corporations and economic structures. The development of the Internet and other technologies has paved the way for corporate power to arguably become the current most powerful global force (Castells,

1996). Today, much of the world's products and services are distributed by large transnational corporations, due partly to the advanced technologies that allow these corporations to continue to expand their global reach (Langman and Morris, 2003). In effect, the Internet has contributed to, and perhaps made possible, the problem of global regulatory capture that the anti-neoliberal globalization movement so noisily opposes.

In spite of the benefits the Internet and other new information technologies have provided for multinational corporate and economic structures, scholars argue that the ability of non-governmental organizations to extensively network and build transnational social movements is leading to the emergence of a powerful new force in international politics. The increase in non-state actors in global politics, as well as new forums for collective action (cyberactivism, for example) and a broad, sweeping shift toward grassroots collective action and bottom-up resistance is transforming global norms and practices (Khagram, et al., 2002; Wirpsa and Ciriacy-Watrup, 2005; Langman and Morris, 2003).

Summary of Literature Review

The literature review above creates the framework for understanding and examining the climate justice movement, beginning with an overview of environmental justice and the connections between social injustice and environmental degradation. A brief introduction to the science of global warming and climate change is meant to show that the threat of climate change as a result of global warming is real and already occurring.

Examining the projected impacts of global warming and climate change begins to show how this potentially catastrophic environmental problem is also a social justice problem of global proportions. It is clear that those without the capacity (meaning without the funding, infrastructure, economic stability or political strength) to adapt to the changes will be affected more severely than those with a higher capacity to adapt (Smith et al., 2003). It seems almost a cruel twist of fate that the regions of the planet likely to experience the most devastating changes are also the poorest regions with the least adaptive capacity. Further still, the historically contentious nature of global warming and climate change policy negotiations has made it even more difficult to create a fair system for addressing the problem.

Global warming and climate change are occurring at the same time as globalization, which is playing an important role in the development of the climate justice movement. The climate justice movement is evolving in the midst of the anti-neoliberal globalization movement, which has pushed for a return to the grassroots in environmentalism and created an activist environment conducive to the blurring of boundaries between social movement organizations and an increase in the connections between social justice problems and environmental problems. Advances in global communication technologies, such as the Internet, have also allowed for collaborations between social movement organizations that previously would have had much greater difficulty communicating and building a movement. The following chapter will describe the climate justice movement and its development in the context of the framework and background provided in the literature review.

DISCUSSION

The Climate Justice Movement

In March of 2004, on the tenth anniversary of the UNFCCC's entry into force, the current chairman of the Alliance of Small Island States (AOSIS), Jagdish Kunjool, sent out a press release outlining the current concerns and goals of AOSIS. Concluding his statement, Kunjool wrote:

Small Island Developing States are not just losing ground as islands are eaten away by climate change; we are facing an even more intransigent international community, whose opinion on the lack of urgency of the matter of climate change is not shared by AOSIS....Future actions to address climate change can only be meaningfully progressed with an enforced Protocol. Only then can those with the best capabilities in the international community claim some pride in their global and moral duty to the whole world and to humanity (Kunjool, 2004).

The climate justice movement has arisen in response to the “intransigent international community whose opinion on the lack of urgency on the matter” is threatening the very lives of those who are most vulnerable.

A New Activist Network

The climate justice movement can be understood through the lens of the international, networked activist climate created by the anti-neoliberal globalization movement. As discussed in the previous section, the anti-neoliberal globalization movement criticizes the neoliberal, capitalist agenda that appears to dominate

multinational economic structures such as the WTO, the IMF and the World Bank, and points to the inadequate attention paid to human rights and the environment by these agencies (O'Neill and Vandever, 2005; Kavada, 2004; Khagram, et al., 2002). The climate justice movement shares in these criticisms. The resistance of many governments to adequately reduce emissions is considered by many climate change activists to be a symptom of regulatory capture. Economic ties between governments and the fossil fuel industry are commonly cited by activists as a significant part of the reason for the sluggish regulatory response to the problem of global warming and climate change. As previously mentioned, the United States and Australia refused to ratify the Kyoto Protocol on the grounds that it would negatively impact their economies (Roderick, 2005; Hamilton, 2003).

As the impacts of global warming and climate change and its very real effects on people and the environment become increasingly evident, environmental SMOs and human rights SMOs are beginning to find value in forging partnerships. Keck and Sikkink describe how in situations where there is actual or perceived scientific uncertainty, as is certainly the case with global warming and climate change, reframing the issue to focus on human rights can create a situation where action can be independent of scientific data. This has been a successful strategy for transnational environmental groups working on issues of water and air quality, as well as tropical deforestation and oil drilling. The global public may be more responsive to human disasters, rather than numbers, graphs and figures, as the problem worsens (Keck and Sikkink, 1998; Wirpsa and Ciriacy-Watrup, 2005).

In an activist environment influenced by the anti-neoliberal globalization movement, putting a human face on the climate change crisis and a focus on the environmental justice implications of climate change is likely to further the goals of the global warming and climate change resistance movement as a whole. Gelobter, et al. write, “Ideas need a human face to break through commercial noise and political disillusionment. Winning movements must actively foster such leadership and then let it fly” (Gelobter, et al., 2005: 25). The current climate justice movement can be understood as arising out of the shift toward an inclusive form of transnational environmentalism and a reconnection with the grassroots.

Breaking Through the Noise

Although still in its early stages, the climate justice movement is becoming an important presence in global climate change policy negotiations. Until recently, indigenous groups have had little luck receiving more than a token role in climate change policy negotiations. Frustration with this lack of meaningful participation is part of what is behind the climate justice movement. While international climate change policy negotiations have been moving forward at a very slow pace, global warming and climate change have already been taking their toll, particularly for indigenous peoples in sensitive regions. Indigenous peoples are already struggling to adapt to the negative consequences of global warming and climate change because they depend most directly on their local ecosystems for survival and tend to be economically vulnerable (IPCC, 2001).

Indigenous groups and other marginalized communities have made clear their frustration about the United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties' failure to include them in climate change policy negotiations, despite numerous statements requesting more significant participation. Hector Huertez Gonzalez of the International Alliance of Indigenous and Tribal Peoples of Tropical Forests, writes of indigenous participation in the UNFCCC, "It is unacceptable that our issues have not received the attention they deserve, nor our participation. It is regrettable that a U.N. process that touches on our very existence should neglect us to such an extent. Our existence is a right and we are fed up with the kind of window dressing that is being given to our participation and our issues" (Gonzalez, 2001: 1).

The Bonn Declaration, crafted during the sixth UNFCCC Conference of Parties (COP-6) in Bonn, Germany in 2001, was written and signed by the members of the Third International Forum of Indigenous Peoples and Local Communities on Climate Change. The declaration denounced "the fact that neither the UNFCCC nor the Kyoto Protocol recognizes the existence or the contributions of indigenous peoples" and includes a call to action for the UNFCCC to fully recognize the role of indigenous peoples in climate change mitigation and to include them fully in negotiations (International Indian Treaty Council, 2001). This statement has been followed by similar statements at subsequent UNFCCC COPs. The 2001 IPCC report includes a section on climate change and indigenous peoples as well as emphasizing the equity issues for developing countries (IPCC, 2001).

Recently, the Arctic Climate Impact Assessment (ACIA) was released and is co-authored by members of the indigenous community. The ACIA includes indigenous perspectives and the results of indigenous monitoring of arctic climatic changes, as well as a section on the effects of climate change on arctic indigenous peoples (Hassol, 2004; Mustonen, 2005). The first legal case on climate change was brought to the Indian Court on behalf of Sri Lanka, which is experiencing catastrophic erosion of its coastline as a result of sea level rise. If the case fails in the Indian court, it will be brought to the United Nations Human Rights Commission (de Silva, 2005). Pro Public Nepal, a non-governmental organization which advocates for citizen rights to a healthy environment, is in the process of taking legal action as a result of the dangerous swelling of glacial lakes in Nepal (Sharma, 2005). In 2004, the Inuit Circumpolar Conference announced that it is working with attorneys from Earthjustice and the Center for International Environmental Law (CIEL) to file a petition to the Inter-American Commission on Human Rights seeking a declaration that greenhouse gas emissions are a threat to human rights (CIEL, 2004).

David Schlosberg describes environmental injustice, and injustice in general, as a result of “inequitable distribution, a lack of recognition and limited participation” (Schlosberg, 2000: 87). Certainly, all of these factors are involved in climate injustice, from inequitable distribution of resources for adapting to climatic changes to lack of meaningful participation in policy-making. Schlosberg advocates for a networked, inclusive form of movement that empowers participants. He describes a just form of justice movement that includes the varying perspectives and concerns of all individuals

and communities. As the climate justice movement evolves, it appears to be taking on this kind of all-inclusive, broad-based nature that Schlosberg describes (Schlosberg, 2000).

Actors in the Climate Justice Movement

Through its natural links to both the environmental and human rights aspects of climate change, the climate justice movement brings together a variety of organizations with different reasons for fighting against global warming and climate change. The multiple and diverse SMOs involved in the climate justice movement have a variety of individual goals. Many existing organizations, such as the Indigenous Environmental Network and the Alliance of Small Island States, have incorporated climate justice into their work, and new transboundary, transnational organizations are emerging, such as the SnowChange Organization, which coordinates the monitoring of climate change by arctic indigenous groups and shares this information globally through the internet and semi-annual conferences (Mustonen, 2005), and the Climate Justice Programme, an international organization advocating for the legal rights of those currently affected by global warming and climate change in developing countries. Coalitions of environmental activists and human rights activists, such as the Environmental Justice and Climate Change Initiative (a coalition of a wide variety of organizations with an interest in responding to the justice aspects of climate change) are forming.

As global warming and climate change are increasingly accepted by the global public as a reality that is already having devastating impacts internationally, more and

more environmental and social justice organizations are including global warming and climate change in their agendas. A website with links to organizations currently working on issues of climate justice is included as an appendix to this text, but it will be impossible for this project to provide a comprehensive database of actors in the climate justice movement as new, grassroots organizations addressing climate justice are developing at a rapid pace, and existing organizations are expanding their objectives to include climate justice on an almost daily basis.

While every actor and organization involved with the climate justice movement is motivated to action for different reasons, they all share the same goal of reducing the negative effects of global warming and preparing to respond to the consequences in a way that will reduce the social justice problems involved. The solutions to climate injustice must be three-fold: reduce global warming impacts, listen to those who are already affected and find solutions to the problems of adaptive capacity and the unfair distribution of negative consequences.

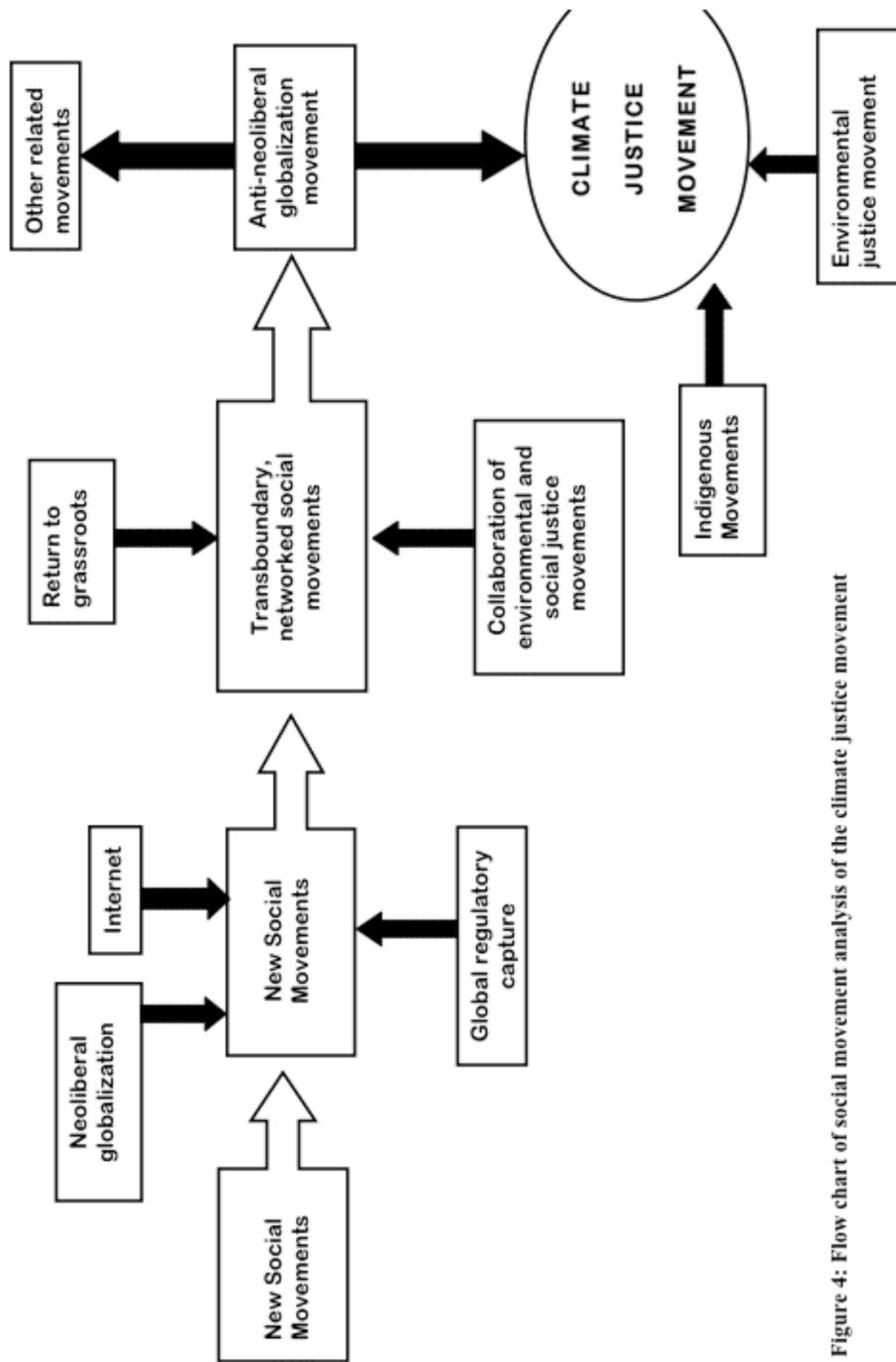


Figure 4: Flow chart of social movement analysis of the climate justice movement

Figure 4 Flow chart of the Climate Justice Movement

CONCLUSIONS

This project seeks to describe the climate justice movement, which has arisen in response to the current and predicted social justice consequences of global warming and climate change. The problem of the disproportionate impacts of global warming and climate change on indigenous peoples, the poor, the elderly and people of color, and the irony that in general these populations bear the least responsibility for the problem, has led to the creation of a climate justice movement. Although the movement is still in its early stages, as the environmental problem of global warming and climate change progresses, the social justice consequences will become increasingly evident and the movement will continue to develop.

The climate justice movement is examined as an example of the type of networking and broad connections that current social movements utilize in an increasingly globalized world. As explained in this text, it exists as part of the transboundary, networked movements that have arisen in response to the anti-neoliberal globalization movement. While the political context and international networking of the climate justice movement makes it part of a unique class of new transboundary social movements, it is also a movement based firmly in the grassroots and can be considered part of the increasingly global environmental justice movement with similarities to indigenous movements as well. Figure 4 on the previous page provides a flow chart illustrating the basis for and influences on the climate justice movement as described in this text.

The actors in the climate justice movement to date are, for the most part, individuals working for grassroots, non-governmental organizations. They are working to increase awareness and understanding about the disproportionate impacts of global warming and climate change on specific communities and to bring their issues to the table at international talks and conventions. Like many grassroots and indigenous social movements, climate justice activists are also building strength through partnerships with larger, international environmental and social justice organizations and by networking with each other. Ties between environmental organizations working on the problem of global warming and climate change are being made.

This project builds on the networking aspects of the movement by bringing together climate justice activists from different organizations together to speak as part of a panel at a conference. At the Public Interest Environmental Law Conference in Eugene, Oregon in 2005, this panel of activists spoke to a room of people also interested in the social justice consequences of global warming and social justice, some of them climate justice activists themselves. This project also involved the creation of web pages designed to provide a guide to the climate justice movement, a directory to organizations and individuals working on this problem, and as a networking resource for climate justice activists.

Like almost any environmental problem, global warming is also clearly a social justice problem. The development of the climate justice movement can bring new life to the environmental and scientific movements developed around global warming and climate change by putting a human face on the problem. As global warming and climate

change progress and their impacts become increasingly difficult to ignore, it will be important for the climate justice movement to continue to monitor the social justice consequences of these impacts and to bring awareness about them to the global public. It will be interesting to watch the development of the movement as the problem continues.

The climate justice movement is a networked response to a looming environmental problem with global and potentially catastrophic consequences for many. At its most basic, it is a cry for help from the people least responsible for global warming, least able to respond to global warming, and the most impacted by global warming. While support for the movement continues to grow, ultimately it will not be successful until the rest of the world hears its message and responds to it.

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