

THE ROLE OF AN ENVIRONMENTAL

NGO

IN THE LANDMARK

FLORIDA

EVERGLADES

RESTORATION

*An ethnography of environmental conflict
resolution with many twists and turns*

Dr. Barbara K. Pryor



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**The Role of an Environmental NGO in the
Landmark Florida Everglades Restoration:
An Ethnography of Environmental Conflict Resolution
with Many Twists and Turns**

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Chapter 1

Introduction to the Long Battle Ahead

In this ethnography, I evaluated the impact of an environmental NGO on the process of resolution of complex environmental conflict in the Florida Everglades restoration primarily through my dual role as participant observer and board member of the Broward Audubon chapter in South Florida. One of Florida's environment's foremost spokespersons and a tireless crusader for Everglades' restoration, Marjory Stoneman Douglas, wrote a landmark study of the Everglades in 1947 which lays the groundwork for the research done in this investigation (see Chapter 2). Although her treatise on the Everglades acknowledged the need for further research in this arena, little comprehensive research such as this has been done thus far in the twenty-first century. "The problem of research in a comparatively unknown area like the Everglades is a curious one," said Douglas (1947), "no comprehensive book on the subject has ever been written before this attempt" (p. 386). While her work remains the standard against which all other studies of the region are measured, there is a gap in the literature that this book addresses with respect to a nongovernmental organization's (NGO's) role in the process of managing critical environmental problems relating to the ongoing battle to restore the Everglades ecosystem.

When Douglas (1947) named the Everglades "a river of grass" in her treasured classic of nature writing, most people considered the region a vast and worthless swamp. She brought the world's attention to the need to preserve the Everglades as the magnificent and unique place that it is. Though much work still must be done to ensure the successful restoration of an ecosystem reduced to less than half of its original size by agricultural growth, unwise water management practices, and urban sprawl, there is hope that fifty-seven years since her story of the life of the grassy water was first published, disparate interests have finally come together to begin to undo the damage and save the Everglades (Douglas, Fiftieth Anniversary Edition 1997, p. 6).

Beyond the unique landscape, the plant and animal species native only to this region, its status as the only wetland of its kind in the world, efforts to preserve the Everglades represent a microcosm of the entire environmental movement (Dugger, 1996). In this regard, Marjory

Stoneman Douglas helped make the Everglades a community and a national and international issue in the broadest sense. Joe Browder of the South Florida Water Management District noted that “she used her strength to say not just what she thought but to persuade thousands of other people to get engaged” (Zaneski, Fiftieth Anniversary Edition 1997, p. 440).

As a result, the movement grew. In 1983, for example, former Florida Governor Bob Graham announced the Save Our Everglades campaign, indicating he intended to heal damage done by decades of drainage by the year 2000. In 1984, the South Florida Water Management District began a project to see if restoration was possible. Zaneski (1997) also points out that John Ogden and other scientists were on a search to define “what made the Everglades unique and how to recapture that magic in a natural system cut down to half its original size” (p. 442). He concludes that dramatic shifts in understanding occurred between the mid-1980s and 90s which provided valuable focus for future research and restoration planning for the crusade to revive the River of Grass.

Moreover, Dugger (1996) posits that the recent attempt to restore the Everglades is typical of the movement from utilitarianism, where natural resources were exploited for their usefulness to the populace, to an era of conservation, where the limits of these natural resources were recognized, and most recently to restoration attempts, or the revitalization of the natural environment. Environmental groups such as Audubon have been preparing to try to ensure that there will be enough political will to see the restoration through.

“This is *the* precedent-setting restoration project in the Western Hemisphere and we’re going to make a stand here,” said Stuart Strahl, the Director of Audubon’s Everglades restoration campaign. He further remarked: “We’re going to set an example for the rest of the world” (Zaneski, Fiftieth Anniversary Edition 1997, p. 453). In particular, the eyes of the world are watching the South Florida Everglades restoration initiative to see just how much damage a hundred years of forced controls have inflicted and just how far the public will extend itself towards remediation (Bottcher, 1994; Boucher, 1995; Cohn, 1994; Derr, 1993; Dugger, 1996; Duplaix, 1990; Finkl, 1995; Goforth, 1994; Gunderson, 1995; Hinrichsen, 1995; Katel, 1996; Wasserman, 1996; Young, 1996; Zubrow, 1995). The final accomplishments of this massive undertaking are still years ahead, thus the result of this struggle, and the impact on other ecosystems worldwide, remain to be seen.

Purpose of the Book

The purpose of this book is to examine the role of an environmental NGO in the Florida Everglades restoration, in this case the influence of the Broward County chapter of the National Audubon Society of

which I have been a long-term member, to provide insight into its impact on the process of resolution of environmental disputes in terms of the successful implementation of the thirty-eight year, federal-state Comprehensive Everglades Restoration Plan (CERP). The final draft of this unprecedented ecological plan, commonly known as the Restudy, a 3,500–page dossier on Everglades restoration comprised of sixty-eight major components and six pilot projects, was released on April 1, 1999 by the Army Corps of Engineers. The comprehensive plan to bring the Everglades back to life followed decades of conflict among a wide range of stakeholders over how to ensure that this national treasure is restored to the highest possible level. Such stakeholders include federal and state agencies, two sovereign Native American Indian Tribes, business leaders, environmentalists, agricultural, economic, and political interests, scores of governmental and nongovernmental organizations, and private citizens (Plumb, 2002).

The \$7.8 billion CERP was ultimately submitted to Congress for their approval in July 2000, and signed into law on December 11, 2000 by the Clinton Administration (Levin, 2001). The Water Resources Development Act (WRDA) of 2000 authorized the CERP in which the plan “established a unique 50/50 cost-sharing partnership between the State of Florida and the Federal Government” (Regalado, 2002, p. 5). Although the CERP was signed into law in late 2000, Congress has yet to appropriate the money for many of the pilot projects to address technical uncertainties prior to full-scale implementation of the plan (Deady and Gromnicki, 2002; Gromnicki and McMahon, 2002; evergladesplan.org). Since much of the restoration is dependent on the results of the pilot projects, it is essential that construction funding for all the projects be appropriated to avoid further delays in the Everglades restoration (Gromnicki, 2003).

Recent History of Everglades Restoration

Currently, two critical components of the South Florida ecosystem initiative—Indian River Lagoon and Picayune Strand (formerly Southern Golden Gate)—are at risk due to encroaching urban development, impending estuarine collapse, and escalating costs (Gromnicki, 2004). Similar to other components of the CERP, these projects are largely an attempt to repair previous damage done by federal and state projects. Gromnicki (2004), Audubon of Florida’s Everglades Policy Director, also argues that “unless Congress authorizes these projects this year, there is a risk that key aspects of Everglades’ restoration will become unattainable” (p. 4).

Gromnicki (2004) further asserts that the Indian River Lagoon and the Picayune Strand projects have the most potential to immediately enlarge the spatial extent of what remains of the Everglades. These vital

areas could provide impressive ecological benefits by 2012 which include: 170,000 acres of restored wetland habitat for more than 2,200 species, at least 35 of which are endangered or threatened; tens of millions of dollars in associated economic and quality of life benefits annually; and improved water flows for the Everglades, 10,000 Islands, St. Lucie Estuary, Florida Bay, and Lake Okeechobee. Moving forward with such projects to fulfill the promise of this historic restoration effort requires prompt congressional approval (Gronnicki, 2004).

According to Grunwald (2002), the CERP is the national model for future restorations, from a \$15 billion proposal for the Louisiana coastal wetlands to a \$20 billion plan for California deltas and rivers. He also acknowledges that “it is becoming the restoration blueprint for the world, studied in south Brazil’s Pantanal and sub-Saharan Africa’s Okavango Delta” (p. A01). Although the fundamental goal of the restoration plan is to “get the water right,” or capture one trillion gallons of rainwater that currently gets flushed out to sea every year, store it in injection wells, then distribute it to farms, people, and the Everglades in the right amounts at the right times, he concludes that it is not remotely clear whether the plan will actually restore the Everglades and if the highly speculative technology will work (see *Background on the CERP* for a more detailed description of this plan and its goals).

Researchers concur that most of the thirty–eight year plan’s ecological benefits for the Everglades are riddled with uncertainties and delayed for decades. “The Everglades is a test,” the legendary author and activist Marjory Stoneman Douglas would often say, “if we pass, we may get to keep the planet” (Grunwald, 2002, p. A01). The United States Army Corps of Engineers and its state partners in the South Florida Water Management District hope that their focus on “getting the water right” will re-create the original mix of fauna and flora as Douglas had always dreamed (everglades.org; evergladesplan.org).

Grunwald (2002) points out that the members of the Everglades Coalition, the network of forty–five national and state conservation groups that helped push restoration into law, believe that the most enthusiastic environmentalist advocates for the Everglades restoration plan work for the National Audubon Society and its Florida chapters. The chairman of the commission that proposed the plan’s blueprint, Richard Pettigrew, is on Audubon’s board; Audubon staffer Nanciann Regalado is now head of Everglades Outreach for the Army Corps of Engineers. Of all the environmental groups in the Everglades Coalition, Audubon has the most people, money, influence, and access to policymakers (Grunwald, 2002).

Finally, Grunwald (2002) posits that in the political arena, Audubon leaders consistently urge that confrontational coalition letters be toned down. He concludes that Audubon lobbyists focus on getting the federal-

state plan money and momentum, not changing the plan. Consequently, Audubon and its Florida chapters call for “a fully restored Everglades ecosystem where the needs of the human population and the natural system are balanced for the benefit of the environment.” This will require, among other priorities, that local, nongovernmental, regional, tribal, state, and federal entities involved in the restoration effort work through an open, consensus-building process to ensure that the Everglades is indeed restored, to fully fund the CERP at the state, federal, and local levels, and to implement the plan to accomplish 50% hydrologic restoration by 2010 (see Appendix A).

Guiding Questions

The questions that guided this ethnography had to do with perceptions of the effectiveness of the South Florida Broward County Audubon chapter, as an environmental NGO, in managing environmental disputes consistent with the Florida Everglades restoration process.

The overarching question that this study sought to answer was: How does the Broward chapter of the National Audubon Society, Broward County Audubon Society (BCAS), seek to impact the process of resolution of complex environmental conflict relating to the restoration of the Everglades ecosystem?

The second question explored: What are the significant barriers to address that may hinder increasing the Broward chapter’s impact on the management of environmental problems associated with the Everglades restoration process?

Third, this research investigated: How does BCAS, as a social-cultural group, perceive its role in the implementation of the thirty-eight year, federal-state Comprehensive Everglades Restoration Plan (CERP)?

Previous studies of the restoration initiative illustrate that this book depicts a timely study that will contribute much to the environmental dispute resolution arena; there is little research that examines the role of a nongovernmental organization in the process of resolving an environmental conflict related to the comprehensive plan to restore the Everglades by applying alternative dispute resolution (ADR) techniques such as collaborative problem-solving (see Chapter 2 for a review of the relevant literature and research done in the area). Such techniques have the potential to deal effectively with critical environmental problems in the Everglades, and achieve widespread consensus and acceptance of the parties’ agreements in the wider public policy arena.

The goal is to reduce conflicts of interest and to achieve consensus with the purpose of restoring the original, natural flow of water to the Everglades ecosystem, while protecting the cultural interests of the communities in the area (Oyola-Yemaiel, 1999). In this case, the resolution of environmental conflict is anchored in the premise that there

are common interests among all parties involved regarding their own social, economic, and political interests. It also rests on the axiom that there should be consensus among the parties who are to set aside their differences, and who must ultimately be satisfied with the ecological plan to save America's Everglades (Governor's Commission for a Sustainable South Florida, 1999; Oyola-Yemaiel, 1999).

Nature of the Problem

Restoration of the Everglades is particularly important for South Florida's communities because they depend upon the well being of this natural system. The quantity, quality, and distribution of water are the "life line" supporting human endeavors from agriculture to tourism to urban development (Oyola-Yemaiel, 1999, p. 2). If the natural flow of water is not restored, there will be a continuing deterioration of the ecosystem, resulting in a diminished quality of life and standard of living from what we enjoy today (Governor's Commission for a Sustainable South Florida, 1995; Oyola-Yemaiel, 1999; South Florida Ecosystem Restoration Task Force, 1998).

For more than a hundred years—from 1850 to just a few decades ago—Florida waged war on the Everglades. Floridians set out to drain about 4 million acres, "dynamiting dozens of waterways, scoring South Florida with a thousand miles of canals, raising seven hundred miles of levees, and damming, stopping-up, and squeezing-dry everything between" (Carter, 2004, p. 22). In the 1970s, more than a million acres had been claimed for development.

At the same time, South Florida's population skyrocketed from 500,000 to 6 million people since 1948. Developers created megalopolises on wetlands. Sugarcane farming, practiced on what used to be the upper Everglades, grew to a business that generates more than \$2 billion a year in sales and employs close to 40,000 people. The "old Everglades was gone forever;" in its place, "sat a series of languishing, interconnecting swamps" (Carter, 2004, p. 23).

As a result, most of the water—1.7 billion gallons—is dumped into the Atlantic Ocean and Gulf of Mexico every day. As these 1.7 billion gallons make their way through the canals toward the oceans, countless pollutants from agricultural runoff, sewage, and contamination join the flow, altering Florida's coastal waterways. In the meantime, the consensus is that 90 percent of the Everglades' wading birds have disappeared, and extinction threatens more than five dozen species of animals.

Since the most important factor for achieving ecosystem restoration and the benefits that a healthy natural ecosystem represents is human interactions interfacing at the negotiation forum, the future of South Florida is placed upon participant stakeholders representing the majority of the individual, organizational, and community interests of the area. As

Oyola-Yemaiel (1999) also asserts, former Florida Governor Chiles argued in 1992 that if stakeholders fail to reach consensus on how ecosystem restoration is to be achieved, including issues such as who is going to pay for what, what type of restrictions on urban development should apply, what are the implications of water quality standards on agriculture and how this may affect food prices for the consumer, how urban population and migration are related to water availability and distribution, and how water deliveries will affect the Indian tribes and Everglades National Park, there will be no restoration. Thus, Everglades' restoration will be possible only through common understanding of its significance and should be a comprehensive and holistic problem-solving action in which the resolution of environmental conflict and consensus building are the keys to its success (Oyola-Yemaiel, 1999).

In terms of the complexity of the restoration process, the South Florida ecosystem restoration initiative is the largest attempt in the world to restore an ecosystem (South Florida Ecosystem Restoration Task Force, 1998). The initiative encompasses all levels of government including six federal departments (twelve agencies), seven state agencies and commissions, the Miccosukee and Seminole American Indian Tribes, sixteen counties and multiple municipalities, and it includes representatives from environmental organizations such as Audubon, agricultural, political, commercial, recreation, citizen, and many other special interest sectors (South Florida Ecosystem Restoration Task Force, 1998; Water Resources Development Act, 1992).

As an illustration of the complexity of the problems associated with this endeavor, Oyola-Yemaiel (1999) argues that the Miccosukee Tribe of Indians of Florida have been in dispute with the federal government since 1776 when the country was founded, later with the State of Florida, and most recently with the National Park Service since 1943. These environmental disputes have centered on the right of the Miccosukee to inhabit the Everglades, including the right to develop parcels of land for housing and services, as well as the right of self-determination (Lehtinen, 1999; Oyola-Yemaiel, 1999). This matter percolates to other federal agencies such as the Bureau of Indian Affairs, the Environmental Protection Agency, and the United States Army Corps of Engineers, and it affects the governments of the state of Florida and several South Florida counties. It also spilled over into the interests of environmentalists who, in short, want to preserve the Everglades as pristinely as possible whereby human intrusion is considered a nuisance to the park service and conservationists because of possible polluting effects (Lehtinen, 1999; Oyola-Yemaiel, 1999).

The interests of the agricultural community, primarily situated in the Everglades Agricultural Area and represented by the sugar, citrus, produce, and dairy interests, have also been placed in a controversial

relationship with the other parties involved in the Everglades ecosystem restoration initiative, such as the Miccosukee and environmentalists. Oyola-Yemaiel (1999) argues that since the Everglades Agricultural Area and the hydrological engineering system were established mainly for the benefit of the agriculture sector that has now become the major polluter of the Everglades, elimination of point source pollution requires, among other things, the agricultural industries to change their traditional business and land use practices. Consequently, he concludes that the agricultural sector is under pressure in a hostile environment to the point that their land holdings are at stake.

An additional land use issue comes from the environmental sector, which is applying increasing pressure to convert private lands into conservation areas that act as wildlife habitat sanctuaries for endangered species and eliminate human habitation (Oyola-Yemaiel, 1999). In particular, Bryant (1972) posits that ownership of land lies at the heart of the problem of shaping and reshaping our environment. Far too often land problems are simply ignored. In this case, community planning and the Everglades restoration are addressing issues of land use in order to resolve long-term physical and social environmental conflict. For example, the federal and state governments are acting to purchase portions of Everglades Agricultural Area lands for storm water treatment areas and for water storage.

O'Brien (1999) acknowledges that land use rights and private property rights have become common interests of the agricultural and Indian communities and have attracted the attention of national land rights advocates; however, the agricultural and Indian sectors have been in dispute over water matters for a long time. The Miccosukee argue that the agricultural industry is an upstream polluter of the Everglades that affects Indian cultural traditional land use. The sugar and citrus interests see the Miccosukee Tribe as a major contributor to increased regulation leading to increased costs of production because they have been in the forefront of litigation for Everglades' environmental protection (O'Brien, 1999; Oyola-Yemaiel, 1999).

On the one hand, according to O'Brien (1999), it appears that the agricultural and Indian groups are allies with respect to the principles of land use rights. On the other hand, they are in contention with respect to point source pollution and water usage. Ultimately, the most desirable way to address all points of conflict in this environmental arena is comprehensively and holistically in order to fully understand the complexity of the problems that this diverse constituency of stakeholders must reach consensus on with the purpose of restoring the Everglades, while protecting the cultural interests of the communities in the area (Oyola-Yemaiel, 1999).

Everglades Ecosystem

Over a century ago, a vast system of interconnected lakes, rivers, and wetlands spread across much of southern Florida. Beginning near Orlando, the Everglades extended south through the Kissimmee River to Lake Okeechobee, and to coastal estuaries on Florida's east and west coasts, Florida Bay and the Florida Keys (Carter, 2004; Dix and Maggonigle, 1905; Dovell, 1942; Elvone, 1943; Stephan, 1942; Strahl, 2001). Stretching south from the vast 730 square mile Lake Okeechobee, nourished by the rain soaked Kissimmee River Basin, the historic Everglades is a wide slow moving river of marsh and saw grass covering some 4,500 square miles, flowing peacefully towards the mangrove estuaries of the Gulf of Mexico (Douglas, 1947).

Stuart Strahl (2001), the former President of Audubon of Florida, contended that in the past the Everglades were considered a paradise for wildlife. Hundreds of thousands of wading birds were seen nesting in enormous rookeries, ibis, egrets, spoonbills, and storks filled the skies, Florida panthers roamed the marshes, alligators were found in the inland marshes, and crocodiles lived along the coast. In this regard, when Douglas (1947) named this magnificent region a "river of grass" in her classic study of the Everglades, she stated (pp. 5–6):

There are no other Everglades in the world. They are, they have always been, one of the unique regions of the earth, remote, never wholly known. Nothing anywhere else is like them: their vast glittering openness...The racing free salt-ness and sweetness of their massive winds, under the dazzling blue heights of space. They are unique also in the simplicity, the diversity, the related harmony of the forms of life they enclose. The miracle of the light pours over the green and brown expanse of saw grass and of water, shining and slow-moving below, the grass and water that is the meaning and the central fact of the Everglades of Florida. It is a river of grass.

Overall, the Everglades ecosystem is relatively new in that it dates back only five thousand years ago (Carter, 2004; Dovell, 1948; Greene, 2001; Light, Gunderson, and Holling, 1995; Roy and Gherini, 2000). Scientists have determined that the Florida Plateau, essentially the plate of earth that Florida and much of its surrounding waters sit on, was originally a component of what became the African continent, near Senegal. To this extent, in those early years (Carter, 2004, pp. 61–63):

Plants and animals died in its waters sank to the bottom, and their decomposition in the saltwater created calcium carbonate, better known as limestone. Layer piled upon layer, creating a foundation of death for the future Everglades to inhabit. Even when that giant meteor hit the nearby Yucatan peninsula, wiping

out all the dinosaurs, the limestone just kept on slowly rising. The Florida Plateau wasn't shaken up and stayed decidedly flat, except for a slight southwestwardly tilt (the all-important tilt that led directly to the Everglades' creation). Finally, around 25 million years B.C., land poked out of the ocean for the very first time below Georgia. The Sunshine State had arrived. The area that would become Lake Okeechobee and the Everglades remained underwater, however, gathering ever more limestone—all told, thirteen thousand feet of it accumulated near the lake and twenty thousand down near Florida Bay. Over thousands of years Lake Okeechobee started to take shape.

Just months after being granted statehood in 1845, the Florida legislature passed a resolution asking the United States government's aid in draining and dredging the Everglades. The state's rallying battle cry, "Drain the Swamp!" could be heard all the way up in Washington, D.C. Large components of the Everglades were ultimately drained; Lake Okeechobee could no longer flood. However, the Everglades became too dry. Carter (2004) also remarks that "the much-valued overlying peat would catch fire and thousands of acres would burn until only limestone remained—soil blew away like dust in an Oklahoma windstorm" (p. 80).

As if that were not enough, in the fall of 1947, two powerful hurricanes devastated South Florida in a one-month period. As a result, close to 90 percent of the land from Orlando to the bottom of the peninsula temporarily went underwater. The Army Corps of Engineers rolled up its sleeves and collected existing drainage data, creating the Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes, which it submitted to Congress in 1948.

When Congress authorized the Central and South Florida Project in 1948, an elaborate system of roads, canals, levees, and water-control structures would be constructed that would significantly degrade the original wetland and jeopardize it nearly to the point of collapse. For the first time ever, the Everglades were seen as one ecosystem stretching from the lakes feeding the Kissimmee River down to Florida Bay, and humans were going to alter it completely. What was an unpredictable free-flowing natural system, "controlled by Mother Nature, was going to be turned into a compartmentalized, completely restricted artificial system controlled by Civilization" (Carter, 2004, p. 83).

In essence, the Corps of Engineers took what had been a fluid, free-flowing system and broke it down into separate interconnected sections, compartmentalizing the entire Everglades ecosystem. Carter (2004) argues that it took a while, but by the 1950s, the Corps had machines digging ditches throughout Mid and South Florida, dozens of pumping stations were built, taller and thicker levees were raised, fifteen hundred square miles were impounded into reservoirs, and hundreds of spill-ways

were later constructed—many with water-stopping gates.

Today, this once expansive, free-flowing system has been altered by the construction of 1000 miles of canals and 720 miles of levees. The consensus is that flow is currently controlled by 16 pump stations and 200 gates and other water control structures. The watershed of southeastern Florida has three major basins which include the Kissimmee River, Lake Okeechobee, and the Everglades (Carter, 2004; Light, Gunderson, and Holling, 1995; Porter and Porter, 2001). Although most water management activities in this compartmentalized system have generally occurred in these regions, researchers point out that other basins to the west, particularly the Caloosahatchee River and the Big Cypress Area, are components of South Florida's hydrologic system. Rainfall is the primary hydrologic input to the system, and it provides the renewable resource for all sectors of consumption (Light, Gunderson, and Holling, 1995; Porter and Porter, 2001).

Analysts such as Light, Gunderson, and Holling (1995) contend that land in the historic Everglades is divided into the following sectors of use: urban area, agricultural area, water control/water conservation areas, and Everglades National Park. In particular, urban uses have consumed approximately 12 percent of the ecosystem, and different forms of agriculture have consumed another 27 percent (Light, Gunderson, and Holling, 1995). Researchers argue that of the original Everglades, less than half remains in some form of a natural state, the central third of the system's marshes have been designated as Water Conservation Areas, and approximately 21 percent of the historic system is preserved in Everglades National Park. Rapid development and water management practices have not only affected this region's cultural landscape, but also altered critical habitats for more than sixty-eight federally listed endangered or threatened species in the Everglades, including the Florida panther, American crocodile, manatee, snail kite, Southern bald eagle, and the wood stork.

Moreover, since Douglas (1947) published her treasured study of the River of Grass, "the Everglades' troubles worsened," and "Everglades National Park—opened in 1947 in an attempt to preserve a portion of the original River of Grass—has been fighting for its life" whereby (Zaneski, 1997, pp. 428–429):

Once-vast colonies of wading birds vanished; exotic plants invaded parched wetlands throughout the ecosystem; cattails replaced native saw grass in marshes polluted by fertilizers in the northern Everglades; dangerously high levels of mercury were discovered in the tissues and eggs of wildlife; and salty water pushed inland, contaminating aquifers and killing fresh-water wetland plants. Urban development and massive diversions of water imperiled Everglades National Park and the ten other national parks and

refuges throughout the Everglades ecosystem that provide habitat for the region's nearly seventy threatened or endangered species.

In terms of its international significance in this book, Maltby and Dugan (1994) argue that the Everglades are important not only at a regional level and "at a national level to the United States, but also at an international level to the world community" (p. 29). In this regard, they point out that Everglades National Park is recognized on three international lists:

1. International Biosphere Reserve (1976)
2. World Heritage Site (1979)
3. Wetland of International Importance under the terms of the Ramsar Treaty on International Wetlands (1987)

According to Maltby and Dugan (1994), there are only two other sites in the world which appear on all three of the preceding lists: Lake Ichkeul in Tunisia and Srebarna Lake in Bulgaria. They argue that Lake Ichkeul has already suffered major degradation due to the reduction of water inflow by upstream dams, and that Srebarna is a relatively small and not easily accessed area. The Everglades is, therefore, a key standard bearer for the "efficacy of international conservation designation and the viability of supporting conventions to which the United States is a signatory member" (Maltby and Dugan, 1994, p. 37). No other tropical or subtropical wetland enjoys such overt recognition of its biological importance.

Definition and Organization of NGOs

In connection with the term NGO as it will be used in this book, defining who and what constitutes an NGO is subject to considerable debate since the primary issue is whether the term should refer to all nongovernmental actors, or to only nonprofit organizations (Lindborg, 1992). In this regard, Lindborg (1992) noted that the Environmental Liaison Centre International issued a statement in August 1990 that "NGOs are nonprofit, non-party political organizations, including groupings such as environment and development, youth, indigenous people, consumer and religious" (p. 2). Ultimately, instead of settling the debate, Lindborg (1992) used the term NGO to refer to "non-business, nonprofit groups dedicated to environmental protection, development, and human services" (p. 3).

Additionally, Arts (1998) points out in his multiple-case study on the political influence of global NGOs, that an NGO is generally defined as "any organization which is not established by a government or group of governments" (p. 24). In contrast, Arts (1998) states that others define NGOs as non-profit pressure groups (Thompson-Feraru, 1974). The latter definition is adopted in his study because it focuses on

pressure groups, particularly environmental organizations, which try to influence international policies. Arts (1998) defined a global NGO as “a promotional pressure group which seeks to influence political decision making on certain issues at global level” (p. 50).

Shmueli and Vranesky (1996) argue that the unofficial structure of environmental nongovernmental organizations (ENGOS) has a public and official character and that its purposes resemble those of intergovernmental agencies. They also theorize that ENGOS are responsible for playing a significant role in the development of both international and national environmental policy and law. Shmueli and Vranesky (1996) conclude that international cooperation is strongly influenced by ENGOS like Audubon that operate across political and bureaucratic boundaries and ultimately form networks of influence on policy decisions.

A substantial number of NGOs for environmental protection flourished nationwide from the 1970s to the 1990s to translate public environmental concern into the political arena (Oyola-Yemaiel, 1999). For example, some like the Environmental Defense Fund, Zero Population Growth, and Friends of the Earth were militant, politically active, and extremely ingenious in utilizing all avenues of the political process such as the courts, demonstrations, elections, and lobbying to further their goals. Others such as Greenpeace concentrated on lobbying for regulation of waste disposal. More traditional NGOs, like the Izaak Walton League and the Citizens Committee on Natural Resources, played an increasing role in environmental preservation. The World Wildlife Fund was established to protect biodiversity around the world. The Sierra Club and the National Audubon Society formed committees to help protect natural resources in public lands.

Lindborg (1992) estimates that 2,230 NGOs existed in developing countries and 13,000 in developed countries in 1982, and that since 1945, the number of NGOs that have permanent United Nations (UN) accreditation has risen from 41 to 928. The vast number of NGOs include: scientific, educational, philanthropic, and economic organizations, in addition to multinational corporations, however, each organization has its own philosophy, agenda, strategies, and areas of expertise (Knickerbocker, 2000; Lindborg, 1992; McMahon, 1993; Warkentin, 2001). Finally, it is argued that the unofficial structure of NGOs has both a public and official character in which it carries on independent but often coordinated activities with existing international intergovernmental organizations (Aall, 2000; Judge, 1997; Shmueli and Vranesky, 1996).

Defining the Characteristics of Environmental Conflicts

The term environmental conflict, as it will be used in this book, stems from divergent views about how to allocate and utilize land, water, air,

and living resources, and at its deepest level, it is the division that arises over competing demands for individual and collective rights, biophysical constraints, and fulfillment of basic human needs under conditions of both political and scientific uncertainty (Glavovic, Dukes, and Lynott, 1997). In particular, environmental conflicts uniquely manifest high levels of the following characteristics (Faure and Rubin, 1993; Glavovic, Dukes, and Lynott, 1997, p. 271):

- They center on the relationship between natural and human systems, exhibiting high levels of complexity and uncertainty, and they impinge on the public good.
- There are multiple parties with divergent views, resources, and experiences involved in or affected by environmental disputes.
- The environmental setting involves incongruous boundary conditions.

Glavovic, Dukes, and Lynott (1997) posit that environmental conflicts can be distinguished by virtue of their primary concern with the allocation and use of land, water, air, and living resources; they also conclude that this focus is manifested in disputes characterized by high levels of complexity and uncertainty with consequences that affect the public good, are subject to incongruous boundary conditions, and involve multiple stakeholders.

According to Libiszewski (1992), environmental conflicts manifest themselves as “political, social, economic, ethnic, religious, or territorial conflicts or conflicts over resources or national interests...they are induced by an environmental degradation” (p. 13). He also posits that environmental conflicts are characterized by the principal importance of degradation in one or more of the following fields: (1) over use of renewable resources; (2) pollution, or overstrain of the environment’s sink capacity; or (3) impoverishment of the space of living.

Local or regional instability arising from environmental, resource, and political factors may escalate to the international level, therefore, governments must identify and address cases in which ongoing environmental degradation and the non-sustainable use of natural resources threaten security (Gleick, 1991; Homer-Dixon, 1998; Molvaer, 1991; Rees, 1991; Ullman, 1983). In particular, Homer-Dixon (1991) offers several examples of how environmental change may lead to acute conflict (p. 77):

Environmental change may shift the balance of power between states either regionally or globally, producing instabilities that could lead to war. As global environmental damage increases the disparity between the North and South, poor nations may

militarily confront the rich for a greater share of the world's wealth...Bulging populations and land stress may produce waves of environmental refugees that spill across borders with destabilizing effects on the recipient's domestic order and on international security. Countries may fight over dwindling supplies of water and the effects of upstream pollution. Ultimately, resource scarcities and ecological stresses may constitute real and imminent challenges to peace.

Porter and Brown (1991) argue that the current rise of critical national and global environmental concerns, including desertification, deforestation, global warming, ozone depletion, pollution of irreplaceable resources, species loss, and the dramatic effects of world population growth, has created new linkages between environmental issues and international security. The environment is no longer merely considered a scientific and technical issue, but one that is intertwined with other major issues in world politics such as: "the future of North-South relations, the international system of resource production and use, the liberalization of world trade," as well as East-West relations and the meaning of both national and international security (Brock, 1992; Dabelko, 1995; Deudney and Matthew, 1999; Homer-Dixon, 1994; Mathews, 1989; Porter and Brown, 1991, pp. 1–2).

In sum, the realization that environmental threats, such as the threats to the Everglades ecosystem, can have serious socioeconomic and human costs, and cannot be solved by the unilateral decisions of states, has led to increased international cooperation in seeking solutions to environmental degradation (Diehl and Gleditsch, 2000; Homer-Dixon, 1999; Porter and Brown, 1991).

Background on the CERP

In response to the damage inflicted on the Everglades since the turn of the twentieth century, comprehensive plans are underway to bring the ecosystem back to life. In particular, the Everglades restoration effort is currently setting national and international precedents as the largest-scale ecosystem restoration project ever attempted in which plans are underway to (Strahl, 2001):

- Clean up the polluted waters of the Everglades.
- Restore the water flow throughout the Everglades, and distribute the water in a way that basically mimics the natural historic flow.
- Purchase privately owned lands through federal and state acquisition programs before they are lost forever to development.

Overall, the Florida and National Audubon societies, as well as more than forty other state and national environmental organizations that make up the Everglades Coalition, including the Everglades Foundation, Sierra Club, World Wildlife Fund, National Wildlife Federation, and the National Parks Conservation Association, support the successful implementation of the Comprehensive Everglades Restoration Plan (CERP) released by the United States Army Corps of Engineers in October 1998 (Carter, 2004; Lee, 1999; Zaneski, 2001). The Everglades Coalition's vision is to achieve at least 50 percent restoration benefits from the CERP by 2010. From this vision, they have selected a "Top Ten" list of the most pressing steps that must be achieved in 2004. The selection criteria are their overall importance to the Everglades restoration initiative, their precedent-setting qualities, as well as their timeliness in the CERP schedule. The Everglades Coalition concurs that the latter criterion is important given the need for the CERP to remain on schedule in order to maintain public confidence. To this extent, the following is their "Must Do List For 2004" (The Everglades Coalition, January 23, 2004 Release, p. 2):

1. Overhaul Programmatic Regulations for CERP—Provide the required assurances that the Everglades will be expediently and fully restored, and finalize and promulgate adequate interim goals (see Appendix J).

2. Abide by the President/Governor Agreement—Establish the state and federal rules and policies necessary to preclude water allocation decisions that would "permit away" water necessary for restoration.

3. Honor Federal Consent Decree: 10 parts per billion phosphorus—Phosphorus pollution cleanup must be implemented to ensure 10 parts per billion (ppb) phosphorus is achieved throughout the Everglades Protection Area by 2006.

4. Implement Polluter Pay—The Florida Legislature must implement Florida's constitutional amendment and protect taxpayers.

5. Achieve Adequate Funding—State and federal appropriations must be secured to insure achieving significant steps toward real restoration.

6. Expedite Buying Necessary Lands—CERP implementation progress must include acquisition of all lands within the Water Preserve Areas footprints and acquisition of lands identified for water storage flow ways in the Biscayne Bay Coastal Wetlands

Project.

7. Authorize Pilot Projects—Prior to full-scale implementation of the CERP, all pilot projects must be authorized, monitored, and fully analyzed, and outstanding concerns must be resolved.

8. Restore Flows to Florida Bay—Modified Water Deliveries and C-111 Projects must progress consistent with the authorized restoration purposes in a way that ensures that required flows to Everglades National Park be realized as quickly as possible.

9. Verify the Science—Establish a fully independent scientific review board consisting of scientists with Everglades expertise, tasked with reviewing all scientific aspects of Everglades restoration.

10. Improve Lake Okeechobee Operations—The U.S. Army Corps of Engineers and the South Florida Water Management District must adopt a policy that adequately protects the natural environment of the liquid heart of the Everglades ecosystem, Lake Okeechobee, and the estuaries.

As noted earlier, the final draft of the thirty-eight year, \$7.8 billion federal-state restoration plan, commonly known as the Central and Southern Florida Project Review Study or the Restudy, a 3,500–page plan made up of nearly seventy different construction projects and six pilot projects, was completed on April 1, 1999 by the Army Corps of Engineers. This culminated in the landmark CERP. The CERP was submitted to Congress for their approval in July 2000, and former President Bill Clinton signed the Water Resources Development Act (WRDA) of 2000 committing \$4 billion to the Everglades restoration initiative on December 11, 2000 (Levin, 2001).

Strahl (2000) argues that this landmark event is an important milestone for the Everglades and marks a major victory for Florida Audubon because its consensus-based approach of building a diverse constituency of stakeholders has proven effective: working with environmental, political, economic, and agricultural interests for the support of the Everglades plan was the key to the passage of the *Restoring the Everglades, an American Legacy Act* (REAL) legislation on November 3, 2000 by Congress to authorize and initiate funding for the comprehensive plan to restore America's Everglades. Tipton (2001) of the National Parks Conservation Association concurs that the Everglades restoration was a defining moment for Audubon. Their Everglades restoration campaign in Miami is the largest regionally based environmental campaign in the country, and with Audubon's scientists and planners at virtually every level of government at which the restoration was discussed, "they were the big

player” in this project (Gromnicki, 2000; Zaneski, 2001, p. 53).

Moreover, Strahl (2002) states that the close of Florida’s 2002 legislative session has proved once again that “with our 100–year base in sound science and advocacy, Audubon continues to be an aggressive leader on conservation policy initiatives” (p. 2). With the progress they have made this year, Strahl (2002) has particularly high hopes for the success of the restoration of the Everglades. He concludes that although this massive environmental restoration project will require continuous involvement by the members, staff, and volunteers who make up Audubon and all its chapters, their results to date have been dramatic. Florida Audubon’s members and staff have increased their commitment to conserve, protect, and restore Florida’s natural heritage; some of the many examples of their progress are summarized as follows (Strahl, 2002, p. 2):

- New conservation campaigns on Southwest Florida growth management and the ecological health of Lake Okeechobee.
- Expansion of electronic advocacy program—a powerful tool for effecting legislative change.
- Convening another annual Audubon Assembly—setting conservation goals for Florida’s future.
- The re-opening of the newly refurbished Audubon Center for Birds of Prey, now the most advanced private wildlife rehabilitation center in the eastern United States.
- Streamlining finances: Dramatically cut administrative expenses over the past eight months while continuing to deliver outstanding field programs.
- 20 percent growth in Audubon membership statewide.
- The state legislature’s approval of a critical bonding bill to finance the Everglades restoration and related conservation initiatives.

Florida Audubon’s Conservation Director, Eric Draper (2002), contends that after months of negotiation, Audubon’s top legislative priority was approved when the Florida legislature passed the landmark bonding bill on March 22, 2002 to issue Everglades restoration bonds to fund restoration. Restoration advocates such as Audubon posit that House Bill 813 allows restoration bonds to provide \$1 billion to secure state funding to create reservoirs to recharge drinking-water aquifers and reclaim the River of Grass’s marshes. The bill’s main feature is to allow \$100 million in low-interest bonds to be issued for each of the next eight years to pay for land acquisition and other Everglades restoration costs.

Audubon reports that Governor Bush signed the bonding bill into law on May 15, 2002. It will allow restoration costs to be repaid over the thirty-eight year life of the Everglades restoration project (Draper, 2002).

According to Santaniello (2002), the federal-state plan to restore the Everglades proposes to (pp. 2–3):

- Reconnect the south-central Everglades by tearing down levees in Water Conservation Area 3 and raising a twenty-mile stretch of the Tamiami Trail west of Krome Avenue onto a series of small bridges, allowing a wider band of water flow into Everglades National Park to rebuild its Shark River Slough.
- Sink 333 two-way wells—including 200 flanking Lake Okeechobee and others in western Palm Beach County—into the Florida Aquifer.
- Convert 60,000 acres of farmland south of Lake Okeechobee, 9,700 acres of deep rock-mining pits in western Miami-Dade County and land west of Boca Raton and Boynton Beach into reservoirs in which: the eighty-foot deep rock pits would be encircled by subterranean barriers to halt underground seepage.
- Build two plants in Miami-Dade County to clean up wastewater for delivery to Biscayne Bay and also to recharge water wells.
- Add seventy new pump stations outside the margin of the Everglades so that an over-mechanized drainage system can treat it more effectively.

As explained earlier, the final draft of the CERP launched the first week of April 1999 by the Corps of Engineers was signed into law by the Clinton Administration in December 2000. To this extent, the Corps Outreach Coordinator, Nanciann Regaldo (2002), points out that the CERP was developed through a collaborative planning process that spanned many years and included contributions from hundreds of agency representatives, not only from Florida, but from other areas of the country as well. She also acknowledges that another key participant in the success of the collaborative planning process was the public, including representatives from many special interest groups, who played a critical role in making it a scientifically sound and technically feasible plan. “Public involvement will be just as important as the CERP Team moves forward with the implementation of Everglades restoration projects,” said Regaldo (2002), “as we proceed with developing Project Management Plans and Project Implementation Reports, we will intensify our outreach efforts,” ensuring the public has meaningful opportunities to participate in the process (p. 15).

In terms of the implementation of the sixty-eight major projects that comprise the historic restoration plan, McClure and Santaniello (1999) provide a brief synopsis of the pros and cons of some of its key construction projects (p. 6G):

Reservoirs. These water storage areas, four to twelve feet deep, would allow floodwaters collected in the rainy season to be put to use in the dry season.

Pros: Reconfigures the current drainage system so that fresh water is not wasted by being dumped into the ocean, and it also ends the need to drown the Everglades in excess floodwaters.

Cons: High costs for real estate and some water evaporates. Land, usually underdeveloped, must be purchased.

Greenbelt. Large area of unspoiled land would connect Jonathan Dickinson State Park, Dupuis Reserve, as well as J.W. Corbett Wildlife Management Area.

Pros: Conserves unpolluted water supplies and provides wilderness corridors, allowing animals to roam from one large preserve to another.

Cons: Land is not yet available for development.

Storm water treatment areas. Manmade marshes to cleanse polluted water.

Pros: Conserves and cleanses water.

Cons: Land, usually underdeveloped, must be purchased.

Aquifer storage. Approximately 300 wells, about two-thirds around Lake Okeechobee, would be used to inject floodwaters collected in the rainy season for recovery later in the dry season.

Pros: Provides water in the dry season and land costs are not very high.

Cons: Never used on this scale in the past; possible technical problems.

Water wells. Drinking water wells to be shifted west.

Pros: Allows additional water from reservoirs and aquifer-storage wells to be delivered more effectively.

Cons: Cost and quality of water in western areas not as good.

Weirs. Underwater dams will be built to impede canal flow which will help nourish the Everglades by forcing more water to course through the natural marsh.

Pros: Helps restore water flow through the River of Grass.

Cons: Disputes are likely in terms of the uncertainty about historic water flows.

Artificial lakes. To be lined with impermeable underground walls surrounding the lakes to prevent water from leaking through the porous limestone.

Pros: Evaporation losses are minimized.

Cons: Untested.

Tamiami Trail. To be elevated so it no longer holds back water flow.

Pros: Helps to restore natural water flow through the River of Grass.

Cons: Disputes are likely due to uncertainty about historic water flows.

Waste water reuse. Two water treatment plants will recycle water from sewage systems.

Pros: Greatly extends water supply.

Cons: High cost.

Canal filling. Some canals to be filled to restore more natural water flow.

Pros: Helps restore water flow through the River of Grass.

Cons: Disputes are also likely due to uncertainty about historic water flows.

Although the \$8 billion Everglades restoration is one of the most ambitious and expensive environmental projects in the world in which the state of Florida will provide half of the money to implement the plan, Florida must go back to Congress each year to lobby for the federal share of the allocated funds (Carter, 2004; Fleshler, 2002; Hiassen, 2002; Mahlborg, 2001; Morgan, 2002; Pittman, 2001; Santaniello, 1999; Tribou, 2001; Zaneski, 2001). The restoration plan is far from foolproof because it relies heavily on technologies that have never been tested on such a scale before. While the United States Army Corps of Engineers acknowledges that, inevitably, there will be problems, they say that some of the technology will have to be worked out along the way whereby the restoration will be continually modified as new information becomes available and new technology is created (Barnett and Vogel, 2001; Chang, 2001; Klingener, 2001; Kloor, 2001; Luoma, 2001; Weisskoff, 2000; Williams, 2001).

Further, the United States Army Corps of Engineers (USACE), the State of Florida (the State), and the South Florida Water Management District (SFWMD) entered into a dispute resolution agreement in September 2002 in order to effectively resolve disputes between the parties associated with the implementation of the CERP. The following clause describes the mediation process designed to assist the parties if

they mutually agree to participate in mediation to resolve such disputes (SFWMD, Dispute Resolution Agreement, 2002, p. 4):

Mediation is a non-binding dispute resolution process designed to assist the disputing parties to resolve the dispute. In mediation, the parties mutually select a neutral and impartial third party to facilitate the negotiations. The parties can agree to participate in mediation at any step on the dispute resolution ladder. . . . When the parties at any level agree to a mediation, an additional 30 days is allowed to resolve the dispute at that level. The federal party shall be responsible for 50% and the state party shall be responsible for 50% of the mediation costs, as such costs are incurred. Where a political sub-division of the State of Florida other than the South Florida Water Management District, serves as the non-Federal interest with respect to a portion of the Plan, the parties may mutually elect to apply the procedures set forth in this Agreement to the resolution of any disputes not otherwise governed by another agreement. When a dispute is resolved at any stage in the proceedings described in this Agreement, the parties shall memorialize the resolution in writing.

Regarding the rules that will govern the implementation of the massive restoration plan, the Army Corps of Engineers acknowledged that although the 58–page draft “Programmatic Regulations” of the proposed rules to govern the implementation of the thirty–eight year plan that they released Friday, December 28, 2001, largely limited the regulations to generalities, postponing the details to “less formal protocols” to be drafted later, the Corps did not expect to issue final rules until December 2002 (Fleshler, 2002; Grunwald, 2001, p. 1A; Morgan and Rabin, 2001; Newton, 2001; Sandin, 2001). Specifically, the purpose of the Programmatic Regulations is to establish the processes and procedures needed to implement the Everglades restoration plan, and to ensure the goals and purposes of the plan are achieved, including the restoration, preservation, and protection of the South Florida ecosystem (see Appendix J).

While the Water Resources Development Act (WRDA) of 2000 required the Corps of Engineers to finalize the Programmatic Regulations by December 11, 2002, as further illustrated in Appendix J, the Corps subsequently announced a delay in the submission of the final rules in which it plans to submit them soon, with a target date of late 2003. Upon publication into the Federal Register, there will be a formal sixty–day public comment period, and the Programmatic Regulations will be subject to public review and revision at least every five years to ensure that the goals and purposes of the ecological plan are achieved (Musgrove, 2002). Ultimately, if the restoration plan succeeds, water will flow more naturally through the damaged heart of the Everglades and pulse into

devastated estuaries like Florida Bay; habitat for four hundred species of birds, twenty-five species of mammals, and sixty species of amphibians and reptiles will be revitalized; and water for irrigation and drinking will be abundant for farmers and South Florida's booming urban population which is projected to grow from six million up to twelve to fifteen million people during the next half-century (Carter, 2004; Zaneski, 2001, p. 50).

Significance of the Investigation

This study of the restoration process is significant because in spite of its regional, national, and international significance to the world community, the Everglades is the nation's most endangered natural wetland ecosystem. To this extent, Strahl (2001) argues that the Everglades have become a study in the adverse effects of human disturbance on natural ecosystems in the past few decades in that:

- Since the turn of the twentieth century, over 52 percent of the Everglades marshes have been drained and lost forever to agricultural and urban development.
- Natural water flow patterns have been altered and regulated and remaining marshes are crisscrossed with 1,400 miles of canals.
- Water flowing into the Everglades from nearby urban developments and farms is often polluted with fertilizers, impacting the saw grass marshes and also altering the balance of nature.
- Wading bird populations in the Everglades have substantially decreased by ninety to ninety-five percent.
- The Everglades ecosystem is home to nearly seventy federally listed endangered or threatened species, including the Florida panther, American crocodile, wood stork, and the snail kite.

This work also provides significant insight into state politics because if the \$8 billion, thirty-eight year Everglades restoration plan goes as planned, it will have a massive impact on the environment as well as the economy of South Florida. In particular, many powerful and conflicting economic interests converge in the South Florida region. The area is not only home to one of the nation's most endangered ecosystems it is also home to one of the country's fastest growing metropolitan areas that has an economy largely dependent on the sugar industry and mass tourism (Jewell, 2001; Levin, 1998; Lodge, 1994; Pfankuch, 2000). The region's economic and political interests have been fighting over the Everglades for most of the twentieth century. This largely explains why it was so difficult

to reconcile conflicting demands and finalize the landmark restoration plan (DeWitt, 1994; Seideman, 2001; Tribou, 2002; Zaneski, 2001).

Successfully restoring the Everglades through the federal-state initiative will complement and enhance the region's quality of life in concert with its economy. South Florida is an international, commercial, agricultural, and tourism center with a growing population reflecting economic and social diversity, depending more and more on a fully functioning economy and an adequate freshwater supply. As such, the Greater Miami Chamber of Commerce (1999) argues:

The economy and the high quality of life residents and visitors currently enjoy hinges on the successful restoration of the Everglades. There is no greater example of the interrelationships between society, the economy, and natural environment than South Florida. National and international precedents for resolving the complex issues of sustainability, restoration and conservation will be set through restoration of our nation's most endangered and unique habitat.

Further, this study's findings should be of special interest to many groups that have a longstanding, central interest in achieving consensus agreements to ensure that the Everglades is indeed restored to the highest possible level. The diverse constituency of stakeholder groups in the largest and most dramatic ecological rescue in history include: environmental policymakers, federal, local, and state agencies, governments, governmental and nongovernmental organizations, developers, ecologists, economists, environmentalists, farmers, the Miccosukee and Seminole American Indian Tribes, the sugar industry, business leaders, politicians, private citizens, sociologists, tourism promoters, anthropologists, conflict facilitators, and scientists.

This book also addresses the overall inadequacy in the literature relevant to the role of an environmental NGO in the Everglades restoration, and its use of ADR techniques like collaborative problem-solving to approach complex environmental problems in this arena and actively seek mutually determined solutions. In this regard, Gray (1989) argues that the collaborative problem-solving process needed to successfully manage multiparty environmental disputes like the environmental conflicts associated with the restoration process, should focus on the following dynamics (p.11): (1) the stakeholders are interdependent, (2) solutions emerge by dealing constructively with differences, (3) collaboration involves joint ownership of decisions, (4) stakeholders assume collective responsibility for the future direction of the domain, and (5) collaboration is essentially an emergent process.

Gray (1989) also argues that collaboration can be used to resolve conflict, as well as to advance a shared vision. Specifically, collaborative problem-solving processes can be used to promote a singular vision

shared by stakeholders of diverse interests. This is accomplished through activities that identify all stakeholders, promote the articulation of issues and concerns, and facilitate the formulation of solutions that jointly maximize benefits and minimize risks to affected parties. Collaboration will ultimately create a forum within which consensus about the environmental problems related to the restoration of the Everglades ecosystem can be sought, mutually agreeable solutions can be invented, and collective actions to implement the solutions can be taken (Amy, 1987; Bingham, 1986; Carpenter and Kennedy, 1988; Deutsch, 1973; Dukes, 1998; Folberg and Taylor, 1984; Gray, 1989; Hocker and Wilmot, 1985; Kressel and Pruitt, 1989; Moore, 1986; Susskind, Bacow, and Wheeler, 1983; Susskind and Cruikshank, 1987; Susskind, Levy, and Thomas-Larmer, 2000; Talbot, 1983; Ury, Brett, and Goldberg, 1989).

Looking Ahead

Following this chapter, Chapter 2 reviews the literature involved in the study as it relates to the role of an NGO such as the Broward County chapter of the National Audubon Society in the process of resolving environmental conflict in general and in the Everglades restoration, in particular applying ADR techniques like collaborative problem-solving. The chapter examines the research done in the area and the literature related to the theoretical framework for ADR and significant collaborative problem-solving, mediation, and negotiation theories, pertinent studies in environmental conflict resolution that lay the foundation for this work, as well as the role of NGOs in the environmental conflict resolution arena, studies of the National Audubon Society, environmental activism studies, and case studies relevant to the collaborative efforts to restore the Everglades.

In Chapter 3, the method of inquiry used to conduct the research is explained. It describes the ethnographic paradigm employed, the research questions and objective, the methods and procedures used to collect data, the research design, and the research sites and how they were selected. It discusses the data analysis process and how coding categories were developed. The chapter also addresses concerns relating to the qualitative research methodology.

Chapter 4 explains the data and findings concerning how the Broward County Audubon chapter seeks to impact the process of resolution of environmental conflict related to the Everglades restoration and the cultural themes and patterned regularities that arrive from the finding of the data. Patterns and themes classified into appropriate categories for data analysis will be developed and incorporated into this chapter. The chapter will describe and analyze each of the research categories in-depth based upon the research questions that guided this study.

Chapter 5 reviews the significant findings of the study. After the

summary of the findings, the chapter discusses limitations and implications for practice in the environmental conflict resolution arena. The chapter also discusses implications for future research of the Everglades restoration process.

Chapter 6 will set forth the conclusions. It will provide concluding remarks which are relevant to the fieldwork conducted and the ever-changing Everglades crusade, prior to presenting Appendices A–J. While providing such conclusions, the final chapter incorporates my reflections from the ethnography.

Summary

Chapter 1 presented an in-depth introduction and overview of the book, particularly: its purpose, recent history of Everglades restoration, guiding questions, nature of the core problem that must be addressed in the long battle ahead, an overview of the Everglades ecosystem, definitions of the terms NGO and environmental conflict as they are used in the book, background on the CERP, and significance of the investigation, as well as a look ahead as to how the research will unfold. The first chapter also illustrated that collaboration can be used effectively to settle disputes between the parties immersed in environmental conflicts like the longstanding environmental conflicts related to the South Florida Everglades restoration initiative. In particular, Gray (1989) posits that “collaboration transforms adversarial interaction into a mutual search for information and for solutions that allow those participating to insure that their interests are represented” (p. 7). Collaboration has been used to settle hundreds of site-specific environmental disputes (Bacow and Wheeler, 1984; Bingham, 1986; Susskind, Bacow, and Wheeler, 1983; Talbot, 1983). Within the environmental arena, there are six categories within which collaborative solutions have been sought, including (Bingham, 1986): land use, natural resource management and public land use, toxics, energy, air quality, and water resources.

Gray (1989) effectively summarizes the many benefits of collaborative problem-solving. She demonstrates that when collaboration is used to address multiparty environmental problems similar to the problems associated with the restoration of the Everglades, several crucial benefits are possible (Gray, 1989, p. 21):

- The collective capacity to respond to the problem as well as the quality of solutions considered by the parties’ increases.
- Collaboration can reopen deadlocked negotiations and minimize the possibility that impasse will occur.
- The process ensures that the stakeholders’ interests are considered in any agreement.

- Parties retain ownership of the solution and invent the solutions.
- Participation enhances acceptance of the solution and willingness to implement it.
- The potential to discover novel, innovative solutions is enhanced.
- Relations between the stakeholders improve.
- Costs associated with protracted conflict are reduced.
- Mechanisms for coordinating future actions among the stakeholders can be established.

Moreover, collaboration is an innovative process through which stakeholders who see “different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible” (Gray, 1989, p. 5). The objective of collaboration is to ultimately create a richer, more comprehensive appreciation of complex multiparty problems among the stakeholders than any one of them could construct alone (Gray, 1989). Consequently, Chapter 2 will examine pertinent studies relevant to the role of an environmental NGO in the Florida Everglades restoration, and its use of ADR techniques such as collaboration to approach diverse environmental problems, like the problems that the stakeholders face in the restoration initiative, and actively seek mutually agreeable solutions.