Placing Blame Where Blame is Due: The Culpability of Illegal Armed Groups and Narcotraffickers in Colombia's Environmental and Human Rights Catastrophes

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“Society is defined not just by what it creates but more importantly by what it chooses not to destroy. In the end, it will be an ethical decision whether or not to preserve the integrity of this beautiful planet.”

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Existing research and debate focuses mostly on the social and economic consequences of the Colombian conflict, while largely overlooking the convergence of environmental degradation and human suffering due to the illicit activities and insurgent violence perpetrated on the national territory and its rural and indigenous inhabitants by illegal armed groups and narcotraffickers. The purpose of this Article is to articulate and report on the massive environmental destruction and human rights abuses caused by Colombia’s illegal armed groups. It will emphasize that the victims are often indigenous groups and the rural poor, incapable of protecting their livelihoods and property rights, unable to resist the pressures brought on them by armed groups and narcotraffickers, and less likely to have access to government resources and constitutional protections.

The Article also presents recent findings on the environmental impact of the internal armed conflict to show that environmental degradation and inequitable sharing of the biological and natural
resources can be both a cause and a result of internal armed conflict. Disputes occur over land, water, forestry biodiversity, food-growing potential, mineral and water resources, and forest cover to mask illegal activities and shield the encampments of armed combatants. Colombia’s situation highlights that a critical contribution to peace demands committed implementation of serious and effective policies regarding the conservation and management of forests, water resources, land, and areas of critical biodiversity, as well as the equitable sharing of the benefits of biological resources—all of which are intrinsically linked to essential issues of national security.²

Part I introduces the topic. Part II provides an overview of Colombia’s internal armed conflict and its humanitarian crisis that has existed for more than fifty years. This Section explains that for many years Colombia confronted only sporadic and isolated hostilities, and until recently, the dissident groups failed to exercise control over the national territory. Part II also shows that such low-level hostility was the source of massive migration and bloodshed, and the presence of illegal drugs exacerbated the conflict, transforming Colombia into a nation at war. This Section presents some of the primary actors in the conflict, including their origins and evolution, their role in the struggle and in the illegal drug industry, and their responsibility in Colombia’s human tragedy and in the nation’s environmental devastation. Massive migration from rural areas also demonstrates the need to recognize the nexus between human and environmental rights through Colombia’s situation.

Part III discusses how environmental protection laws in an international armed conflict may be applied to an internal armed conflict. The examination revolves around the environmental protection in an armed conflict designed to prevent harm to the health or survival of the population. This Section also addresses other bodies of law that protect the environment in times of armed conflict such as peacetime environmental treaties and international

² Jeffrey A. McNeely, Biodiversity, War, and Tropical Forests, in War and Tropical Forests: Conservation in Areas of Armed Conflict 3 (Steven V. Price ed., 2003).
human rights law. In addition, Part III describes the Colombian government’s position regarding the Geneva Convention and the application of international humanitarian law to the nation’s conflict. Finally, this Section addresses the laws applicable to environmental protection during internal armed conflict.

Part IV describes several laws and regulations the Colombian government has implemented to protect the environment. This Section argues that the failure of the Colombian government to apply the already enacted legislation during peacetime makes it harder to do so during times of conflict. Part IV also addresses Colombia’s international environmental commitments, specifically the Convention on Biological Diversity through which Colombia developed programs and national strategies for conservation and sustainable use of biological diversity. This Section also examines relevant sections of the Colombian Constitution and domestic legislation.

Part V presents the natural resources and biodiversity impacted by the armed conflict. This Section explores the widespread environmental damage caused by combat in fragile and highly biologically diverse ecosystems, and the forced displacement of thousands of civilians deeper into unspoiled areas of tropical rainforest or overpopulated urban areas. In addition, Part V explains the environmental devastation caused by actions of illegal groups as a result of either manufacturing drugs in order to fuel the armed conflict and sustain the illegal combatants, or as deliberate acts of environmental terrorism against the nation’s oil, gas, and power infrastructure.

Finally, Part VI describes the humanitarian devastation resulting from the conflict, and shows how the rural and indigenous populations are caught up in the power struggle between illegal armed groups for control over national resources and the profits of the illegal drug business.

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3 According to the Colombian non-governmental organization Consultoría para los Derechos Humanos y el Desplazamiento (“CODHES”), during 2002, 412,553 individuals were displaced, and in 2003, there were 207,607 displaced. Desplazamiento en Colombia - La dimensión de una crisis no resuelta (Feb. 18, 2004), at http://www.reliefweb.int/w/rwb.nsf/0/b133e813bced481a85256e4000795eca?OpenDocument.
I. INTRODUCTION AND BACKGROUND

History demonstrates how war assaults the planet's environment and how nature is destroyed as an act of war. Nature is used as a weapon of war and its destruction affects innocent individuals who depend on their environment, forcing them to leave the areas that formed and nourished their communities. Environmental damage is expensive, traumatic and sometimes irreversible. Ecological assaults in combat zones are often kept secret or widely ignored, resulting in more devastating humanitarian and environmental harm.

Today, many tropical forest countries like Colombia are experiencing some type of internal armed conflict. There are struggles in Colombia, Indonesia, Sri Lanka, and several countries in Africa and Central America. McNeely, supra note 2, at 1.

Internal armed conflicts have risen. Of the 110 armed conflicts between 1989 and 1999, 7 were international, 94 were internal, and another 9 were internal with some form of foreign force intervention. Moreover, of the 192 sovereign nations, 163 consider it necessary to assign a considerable portion of their resources for keeping and maintaining regular armed forces in order to confront internal or external threats to their national security. ARTHUR H. WESTING ET AL., ENVIRONMENTAL DEGRADATION AS BOTH CONSEQUENCE AND CAUSE OF ARMED CONFLICT 3, 5 (Working Paper No. 010531, 2001), available at http://www.institute-for-nonviolence.com.au/downloads/pdf/EnvirDegrad.pdf.

The conflict concerns several actors: left-wing guerrilla groups, right-wing paramilitary combatants, and narco-traffickers, pitted against the Colombian government and foreign military and civilian advisers charged with various tasks and goals. Compounding and prolonging the internal conflict are

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5 Internal armed conflicts have risen. Of the 110 armed conflicts between 1989 and 1999, 7 were international, 94 were internal, and another 9 were internal with some form of foreign force intervention. Moreover, of the 192 sovereign nations, 163 consider it necessary to assign a considerable portion of their resources for keeping and maintaining regular armed forces in order to confront internal or external threats to their national security. ARTHUR H. WESTING ET AL., ENVIRONMENTAL DEGRADATION AS BOTH CONSEQUENCE AND CAUSE OF ARMED CONFLICT 3, 5 (Working Paper No. 010531, 2001), available at http://www.institute-for-nonviolence.com.au/downloads/pdf/EnvirDegrad.pdf.
6 See Maria Christina Cardenas, Note, Colombia's Peace Process: The Continuing Search For Peace, 15 FLA. J. INT'L L. 273, 276-80 (2002). For several years, the United States has supported the Colombian government's counter-drug policies and programs, and September 11, 2001, marked United States
complex problems involving property rights, social inequity, economic disparity, institutional corruption, narcotrafficking, terrorism, significant capital flight, and a debilitating brain drain.\(^7\)

To keep the nation afloat, policymakers juggle the dissimilar and urgent tasks of fighting terrorism while attempting to protect the environment and human rights, jumpstart a stagnant economy and reduce excessive unemployment,\(^9\) address high levels of corruption,\(^9\) prosecute the war on drugs on Colombian soil, and cooperation in Colombia’s efforts to defend the nation from insurgent and right-wing groups classified as terrorists. The United States supplies helicopters, intelligence, and different types of training in Colombia, all of which is used in both counter-narcotic and anti-terrorist operations. Luz E. Nagle, *U.S. Mutual Assistance to Colombia: Vague Promises and Diminishing Returns*, 23 *Fordham Int’l L.J.* 1235, 1270-71 (2000) [hereinafter Nagle, *U.S. Mutual Assistance*].


In 2003, Colombia’s inflation rate was 6.49%. *Informe Sobre Inflación*, (Dec. 2003) at http://www.banrep.gov.co/inflaci/2003/inflacion_dic_2003.pdf. According to the Colombian Human Rights Network, [among Colombia’s 40 million people, more than half (56%) live in “absolute poverty,” earning less than $500 US per year. The Colombian government’s adoption of neo-liberal economic policies has only made matters worse, increasing absolute poverty from 45% a decade ago, to 56% today. In rural areas where 80% of people live in absolute poverty, the effect of neo-liberal policies has been even more disastrous. Colombia has an open unemployment rate of 20.7% (one of the highest in Latin America) and an under employment rate of 57%. Thus, only one in four Colombians are fully employed. Witness for Peace, *Colombia Report* (Mar. 2001), at http://colhrnet.igc.org/newitems/wforp.301report.htm.

Colombia ranks 57th in the 2002 Transparency International Corruption Perception Index, with a 3.6% CPI score. A score of 10 means that the country is clean and a score of zero signifies that the country is highly corrupt. A country with a score less than 5.0 has a serious corruption problem. According to Transparency International, Colombia has improved its rating since the 2002 index. Johann Graf Lambsdorff, *2002 Global Corruptions Index*, Global Corruption, 265 (Nov. 27, 2002), at http://www.globalcorruptionreport.org/download/gcr2003/24_Data_and_research.pdf. According to a 2002 World Bank survey, “bribes are paid in 50 per cent [sic] of all state contracts in Colombia. Another World Bank report estimates the cost of corruption in
relieve the suffering of citizens displaced by the internal conflict. Were this not enough, the Colombian state is under immense pressure by outside governments and non-governmental organizations


The annual statistics of displaced people show that the number of registered displaced individuals is less than the estimation of actual displaced people. The registration takes place through the Red Solidaridad Social-Sistema Unico de Registro (“SUR”) and the estimation is performed by the Consultoria para los Derechos Humanos y el Desplazamiento (“CODHES”). According to CODHES, the following numbers of people in Colombia have been displaced per year, beginning with the year 1996:

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Displaced People</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>181,000</td>
</tr>
<tr>
<td>1997</td>
<td>257,000</td>
</tr>
<tr>
<td>1998</td>
<td>308,000</td>
</tr>
<tr>
<td>1999</td>
<td>288,127</td>
</tr>
<tr>
<td>2000</td>
<td>317,375</td>
</tr>
<tr>
<td>2001</td>
<td>341,925</td>
</tr>
<tr>
<td>2002</td>
<td>412,533</td>
</tr>
<tr>
<td>2003</td>
<td>207,607</td>
</tr>
</tbody>
</table>

that monitor, scrutinize, and often criticize every policy decision and governmental action.\textsuperscript{11}

Colombia’s conflict hurts both individuals and nature. Conservationists and environmentalists from around the world are concerned with the harm being done to Colombia’s rich natural habitats, its vast tropical forests, and its unique fauna. Colombia’s lush ecosystem supports millions of people who depend on its water, forests, food sources, and medicinal plants and has been a grave concern at least since the 1980s.\textsuperscript{12} Colombian territory is vital to sustaining life on the planet. The southern department\textsuperscript{13} of Amazonas, which forms an important part of the Amazon basin,\textsuperscript{14} is particularly vital, yet is under immense and increasing pressure from logging, accidental fires, and deforestation.\textsuperscript{15}

Colombia’s internal conflict has forced many rural poor away from their sources of livelihood, placing tremendous pressure on the fragile biodiversity and ecosystem. The amount of displaced

\begin{footnotes}
\item[11] Some foreign governments, non-government organizations, and international celebrities have taken extraordinary steps to show sympathy and support for Colombian revolutionaries, including having hosted, toasted, and feted FARC leaders during a February 2000 whirlwind tour of Europe as guests of the governments of Sweden, Norway, France, Italy (including a meeting with the Pope at the Vatican), Spain, and Switzerland. Tim Johnson, \textit{Colombian Rebels Hit Road For a Lesson in Democracy}, MIAMI HERALD, Feb. 8, 2000, at 1A.


\item[14] “The Amazon often is referred to as the ‘Earth’s Lungs’ because of the massive quantities of carbon dioxide the rainforests absorb from the atmosphere. Unfortunately, researchers say those vital organs are beginning to resemble the lungs of a lifelong smoker.” Stephanie Kriner, \textit{Amazon Rainforest Is Fading Faster Than Originally Thought} (May 26, 1999), at http://www.disasterrelief.org/Disasters/990414Amazon/ (last visited Oct. 9, 2004).

\item[15] \textit{Id}. A researcher has estimated that more than sixteen percent of the Amazon’s original rainforest cover is gone and the percentage increases at an alarming rate during times of drought. \textit{Id}. 
\end{footnotes}
people and their present conditions are quite alarming. According to a report by Colombia Human Rights Network,

[o]f Colombia’s 40 million people, 2.1-2.5 million are estimated to have been displaced, forced to leave their homes and communities because of continuing armed conflict. Displacement is an experience largely restricted to Colombia’s poor. Forty percent are Afro-Colombians displaced from Colombia’s oil-rich pacific coast region. As is true in much of the world, Colombia’s poor are disproportionately women and children: more than 58 percent of the displaced are female and 39 percent of displaced households are headed by women, a group largely abandoned by the government.\(^\text{16}\)

The root of humanitarian and environmental damage in Colombia stems from conflicting economic, social, and cultural realities and policies, and the significant inequity regarding access to the population’s resources and rural land. Consider the following: The World Bank reports the poverty rate in Colombia at 19 percent, with 75 percent of the poor living in the rural countryside.\(^\text{17}\) Yet, in these rural areas, a mere “3 percent of the landed elite own 71.3 percent of arable land while 57 percent of the poorest farmers must subsist off of a mere 2.8 percent of the land.”\(^\text{18}\) Viewed from another perspective, “less than eight per cent [sic] of rural households own 40 per cent [sic] of the cultivated lands, pushing land-poor farmers toward marginal and forested areas.”\(^\text{19}\) These farmers then contribute to deforestation by clearing virgin tracts of land for sustenance farming or for the cultivation of illicit crops.\(^\text{20}\)

\(^{16}\) Colombia Report, supra note 8, at 13.
\(^{18}\) Id.
\(^{20}\) See Judy Mann, Waging Chemical Warfare in Colombia, WASH. POST, Mar. 16, 2001, at C11.
In response to these threats against the environment and biodiversity, Colombia has enacted a corpus of domestic environmental laws and regulations and signed several multilateral environmental conventions, including the 1992 Convention on Biological Diversity. The question is whether, in an armed conflict setting, a government is obligated to protect the nation’s biodiversity, promote the use of sustainable biological resources, and implement initiatives for improving and preserving the environment and the livelihood of those living in the rural territories. Can such obligations be honored and supported if they are considered a vital component of the protection of human rights?

During an internal armed conflict, the protection of the environment and environmental policies, notwithstanding their urgency, becomes a question of priorities. An armed conflict brings numerous casualties to the nation confronting it, and, when internal conflict escalates to become a matter of national and social survival, environmental issues and, too often, humanitarian issues are relegated to a lower priority. Regardless of the severity of an internal armed struggle, the society’s infrastructure deteriorates and the government is forced to compromise or cancel crucial services, terminate important projects, or close bureaucratic offices in order to divert resources to military assets.

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22 For several decades, Colombian citizens as well as the government ignored the humanitarian tragedy of displaced countrymen. The nation grew complacent in living with violence in rural areas, reacting with dismay to the numerous massacres, terrorist attacks, and killings, but remaining oblivious to the massive exodus of victims caught in the crossfire. See Daniel Pcáut, Preface to EL DESPLAZAMIENTO POR LA VIOLENCIA EN COLOMBIA: EXPERIENCIAS, ANALISIS Y POSIBLES ESTRATEGIAS DE ATENCION EN EL DEPARTAMENTO DE ANTIOQUIA 12, 12-23 (Carlos Tassara et al. eds., 1998).

23 For example, in 1998, the Colombian President Andres Pastrana significantly reduced the budget for the Ministry of the Environment. Maria D. Alvarez, Forests in the Time of Violence: Conservation Implications of the Colombian War, in WAR AND TROPICAL FORESTS: CONSERVATION IN AREAS OF ARMED CONFLICT, supra note 2, at 64 [hereinafter Álvarez, Forests].
In weak nations, such as Colombia, the rule of law is all but absent in the rural territory where much of the armed conflict occurs. In these zones of conflict, riddled with so many critical problems, the erosion of civilian or military rule threatens conservation efforts, and the lack of justice in adjudication in the countryside renders any stewardship of the environment nearly impotent.\textsuperscript{24} The effects of economic disparity, the absence of law, and the abandonment of governmental presence in rural areas exacerbate the violence, with inauspicious consequences. In addition, the flight of millions of peasants trying to escape rural violence creates additional pressures on the environment and greatly hinders forestry conservation and restoration.\textsuperscript{25}

Ironically, armed groups practice the only environmental protection in the zones of conflict: a form of coercion called “gunpoint conservation.”\textsuperscript{26} This coercion usually involves placing landmines along mountainous forest access points in order to discourage penetration and to give protective perimeters to remote guerrilla encampments and drug labs.\textsuperscript{27}

Environmental harm in wartime is unavoidable, especially when armed groups target the environment to gain some advantage over adversaries or, as in Colombia, pollute the environment by manufacturing illegal drugs that are then trafficked internationally to provide revenue for provisioning combatants and fomenting the conflict.\textsuperscript{28} History demonstrates that armed conflict results in long-lasting environmental damage.\textsuperscript{29}

\textsuperscript{24} See id. at 65.
\textsuperscript{25} Id.
\textsuperscript{26} Id. at 59.
\textsuperscript{27} Id.
\textsuperscript{28} For an in-depth discussion of the drug production activities of armed groups in Colombia, see Ana María Díaz & Fabio Sanchez, \textit{A Geography of Illicit Crops (Coca Leaf) and Armed Conflict in Colombia}, 32-44 (2004), available at \url{http://www.wider.unu.edu/conference/conference-2004-1/conference%202004-1-papers/Diaz-Sanchez-1905.pdf}. Díaz and Sanchez's study attempts a quantitative analysis of the origins, causes, and consequences of the production of illicit crops in Colombia.
\textsuperscript{29} Historical examples include General Sherman's "scorched earth" March to the Sea in the United States Civil War, and the firebombing of Romania's oilfields by the British Royal Air Force in World War II. See Jay E. Austin & Carl E. Bruch, \textit{Introduction} to \textit{The Environmental Consequences of War:}
Over the last several decades, Colombia’s delicate ecosystem has been under relentless assault by many factors. Various governmental incentives to promote a higher yield or value of crops encouraged significant and often unmonitored agricultural expansion into delicate forest areas. This growth indirectly caused the killing of endemic species, triggering a decline in environmental quality. New economically driven activities, such as mining, cattle ranching, and timber and perennial harvesting, as well as the expansion of illicit crops and the escalation of the internal armed conflict, are responsible for today’s damage.

Compounding the environmental deterioration caused by economic pressures, the internal armed conflict brings a sinister element of environmental devastation to Colombia’s already beleaguered ecosystem and biodiversity. More than 250,000 Colombians have been killed by internal warfare and more than 1,350,000 rural poor have been forcibly displaced throughout the entire nation. Such large-scale displacement hinders the government’s implementation of environmental policies and greatly impedes, if not “precludes the practice of forest management,

LEGAL, ECONOMIC, AND SCIENTIFIC PERSPECTIVES 1 (Jay E. Austin & Carl E. Bruch eds., 2000). Examples of environmental destruction in internal armed conflicts include the conflicts in Bosnia and Kosovo. Id. at 44.

See Kenneth Young et al., Plant Evolution and Endemism in Andean South America: An Introduction, 68 THE BOTANICAL REVIEW, 4 Jan. 1, 2002, (noting that Colombia may have the highest degree of endemic flora and fauna in the Andean countries).

Astrid Puentes, Colombia: Cumplimiento del Convenio de Diversidad Biológica en Bosques, at http://www.wrm.org.uy/paises/Amazonia/Puentes.html (last visited Oct. 9, 2004). The primary causes of the destruction of Colombia’s environment and its unique biodiversity are: 1) the expansion of the agricultural border and colonization into forested and jungle areas (73.3%), 2) timber production, involving both legal and illegal harvesting (11.7%, half of which comes from the Pacific region), 3) firewood consumption (11.0%), 4) forest fires (2%), and 5) cultivation of illicit crops (2%) for drug production. Some indirect causes of destruction of the environment and biodiversity include the inadequate execution and ill planning of infrastructure projects such as hydroelectric dams, highways and road building projects, and weak or corrupted studies of the environmental impact in threatened regions. Id.

restoration and conservation.\textsuperscript{33} The prolonged conflict also creates conditions that are favorable to the expansion of illicit crops.\textsuperscript{34}

II. COLOMBIA’S LEGACY OF INTERNAL ARMED CONFLICT\textsuperscript{35}

During Colombia’s nearly forty-year struggle, its military actions, migrant movements, excessive natural resource exploitation, and deficient management and institutional capacities have seriously damaged the nation’s environment and corroded the welfare of its rural and indigenous populations. Colombia has languished under guerrilla conflict and societal turmoil since the middle of the 20th century, when longstanding socio-political tensions between the Conservative and Liberal parties, the dominant traditional parties in Colombian politics, erupted into widespread violence.\textsuperscript{36} In the last fifty-five years, the nation has yielded excessive bloodshed. By the late 1940s, a \textit{de facto} civil war was underway throughout the Colombian territory. The war became known as the \textit{Violencia} and persisted well into the 1960s, resulting in the deaths of as many as 300,000 Colombians, or two

\textsuperscript{33} Álvarez, \textit{Forests}, supra note 23, at 65.  
\textsuperscript{34} Álvarez, \textit{Environmental Damages}, supra note 32.  
\textsuperscript{35} Until recently, the Colombian conflict was described as an “ambiguous war,” that did not reach the level of an internal armed conflict under Protocol II of the Geneva Conventions of 1949. Under the Protocol, three conditions must be met: the conflict is between the government and dissident armed forces or other organized armed groups, the armed groups are under responsible command, and they exercise control or possession over part of the territory. Until recently, the internal violence and hostilities were just sporadic and isolated, and the dissident armed forces failed to exercise control over the national territory. For a discussion of the definition of internal armed conflict, see \textsc{Lindsay Moir}, \textit{The Law of Internal Armed Conflict} 34-52 (2002). For a description of Colombia’s conflict as “the ambiguous war,” see \textsc{Francisco E. Thoumi}, \textit{El imperio del droga: Narco-trafico, economia y sociedad en los Andes} 325 (2002).  
\textsuperscript{36} Interpretations of the conflict in Colombia have been polarized, between leftists and the right-wing establishment, to support the political viewpoints of those writing about the conflict. No single text presents an accurate picture of the complexities and motivations at the root of Colombia’s international conflict. For a comprehensive historical analysis of the Colombian insurgency in the second half of the 20th century, see \textsc{Bert Ruiz}, \textit{The Colombian Civil War} (2001). \textit{See also} \textsc{David Bushnell}, \textit{The Making of Modern Colombia: A Nation In Spite of Itself} (1993); \textsc{Jenny Pearce}, \textit{Colombia: Inside the Labyrinth} (1990).
percent of the population. Most victims were from rural areas and small cities. The Violencia created massive peasant migration, as they tried to escape growing bloodshed between political factions and between emerging guerrilla groups and government forces. The peasants were forced to squat on vacant lands or crowd into urban areas that eventually became impoverished neighborhoods called comunas.

During the Violencia, peasant groups that aligned with the Liberal Party took to the mountains to form guerrilla bands to protect themselves and their homes from roving Conservative Party marauders. By the mid-1960s, the two primary guerrilla armies that persist today, FARC and ELN, were established and conducting military operations against the Colombian government.

As armed groups assumed control of rural zones, Colombian civilians not aligned with these groups were compelled to flee. "Many peasants were forced to sell their properties at very low prices and others were threatened with death to abandon their land." The new settlers expected the government to offer basic services, but corruption and abuses of privilege were widespread among local government authorities. Civilians' lack of trust of

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37 THOUMI, supra note 35, at 324. For an extensive discussion of the Violencia, see BUSHNELL, supra note 36, at 201-22.
38 The police and army often supported the conservative guerrilla groups. See THOUMI, supra note 35, at 328-29.
39 This situation developed in the Departments of Caldas, Risaralda, Quindío, Tolima and Valle—regions that had been recently settled by prior violent upheavals. The majority of people displaced by the Violencia fled to the middle Magdalena River Valley (Magdalena Medio) and other unpopulated areas. Id. at 324-28.
41 For an extensive study of the history of Colombia's revolutionary armed groups, see Catherine C. LeGrand, The Colombian Crisis in Historical Perspective, 28 CAN. J. LATIN AM. & CARIBBEAN STUD. 165 (2003).
42 According to Colombian anlaysist, Alvaro Jimenez, many of these displaced peasants settled and built their communities in Caqueta, the south of Tolima and Huila, but the settlement lacked State presence. See LAS VERDADERAS INTENCIONES DE LAS FARC 86 (1999) (on file with author).
43 THOUMI, supra note 35, at 328. Many settled in unpopulated areas in western Colombia, especially in the middle Magdalena River valley. Id.
and increasing uncertainty with property rights \(^4^4\) triggered more violence. The uncertainty in land ownership aided the guerrillas in supplanting State authority in many remote areas. \(^4^5\) By the early 1950s, many violent crimes that now characterize most of the activities of today’s illegal armed groups were already well established, including kidnapping for ransom, \(^4^6\)

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\[^4^4\] Many properties lacked titles, or, due to long-established customs, had poorly documented titles. The acclaimed Peruvian activist economist, Hernando de Soto, writes extensively on this theme, noting that:

[the lack of legal property thus explains why citizens in developing and former communist nations cannot make profitable contracts with strangers and cannot get credit, insurance, or utilities services: they have no property to lose. Because they have no legal property, they are taken seriously as contracting parties only by their immediate family and neighbors. People with nothing to lose are trapped in the grubby basement of the precapitalist world.]

\[^4^5\] See THOUMI, supra note 35, at 323-30.

\[^4^6\] Recent statistics for kidnappings in Colombia between 1997 and 2003, which vary slightly among sources, are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Kidnappings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>1693</td>
</tr>
<tr>
<td>1998</td>
<td>2216</td>
</tr>
<tr>
<td>1999</td>
<td>2945</td>
</tr>
<tr>
<td>2000</td>
<td>3706</td>
</tr>
<tr>
<td>2001</td>
<td>3041</td>
</tr>
<tr>
<td>2002</td>
<td>2986</td>
</tr>
<tr>
<td>2003</td>
<td>2043</td>
</tr>
</tbody>
</table>


According to one source, 2,201 individuals were kidnapped in 2003. Of those individuals, 902 were released (in most cases after ransoms were paid), 587 remained detained, 400 were rescued, 204 were freed under pressure from
extortion, terrorism against individuals and communities, and murder for hire. At first the primary targets were ranchers and plantation growers with large landholdings who were victimized by guerrilla incursions onto their lands and forced to make extortion payments.

Indeed, a humanitarian crisis has existed in Colombia for more than fifty years. One study found that violent deaths occurred in areas where violent actors, such as guerrillas, paramilitaries, and narcotraffickers, operated. Moreover, it revealed that “the drastic increase in violent deaths coincided with the development of the illegal drug industry.”

Some of the statistics from the second half of the twentieth century highlight this coincidence. Although the number of violent deaths decreased from 51.5 violent deaths per 100,000 inhabitants in 1955 to 20 violent deaths per 100,000 inhabitants in 1970, the number of politically motivated killings increased consistently afterwards. In 1980, for example, there were close to 40 violent deaths per 100,000 inhabitants, and after 1985 and for the rest of the decade, there was a radical increase to 85 violent deaths per 100,000 inhabitants. From 1998 to 1999, there were 60 violent deaths per 100,000 inhabitants, a ratio ten times

authorities, 71 died in captivity, and 37 managed to escape.” Of those kidnapped, only 29 were of foreign nationality. Colombia: Prosecutors Reveal Scale of Wrongful Arrests, LATINNEWS DAILY, Feb. 24, 2004, at http://www.asiaint.com/Ln/ldb/LDB3293.asp?instance=8&mode=print. According to current estimates, approximately 3,000 individuals are being held hostage as of this writing. FARC is holding roughly 673 kidnapping victims, ELN is holding about 342, and AUC is holding about 174. “A further 542 are held by captors unknown, and 421 kidnappings have been attributed to common criminals.” Id.


48 See Frank Bajak, Businesses Pay ‘Tax Contributions’ to Colombia’s Rebels, CHATTANOOGA TIMES, Nov. 5, 1999, at C3 (describing how by the mid-1990s, the guerrillas, after extorting money from landowners for many years, began preying on wealthy businessmen in urban areas).

49 In a study of sixty countries, Colombia had the highest percentage of interviewees (65%) that believed human rights are not respected. THOUMI, supra note 35, at 327.

50 Id. at 324-25 (citing a study conducted by Rubio).

51 Id. at 325.

52 Id. at 324.

53 Id.
higher than that of the United States. In 2001, 5,176 of 27,841 homicides were politically motivated and there were 259 forced disappearances.

The internal violence over the course of so many decades reveals that Colombia is a nation at war. "No other contemporaneous society, no other society for which there is available historic records, presents in times of peace such levels of violence." A nexus could be seen, however, heading into the last two decades of the 20th century, between political violence and violent deaths resulting from the development of the illegal drugs industry, and the emergence of a right-wing paramilitary presence intended initially to protect the interests of the conservative landed elite.

A. The Actors in the Conflict

This Section will focus on the primary actors that comprise Colombia's current cast of illegal armed groups. To the outside observer trying to get bearings with regard to the Colombian conflict, the illegal armed groups can be divided into the left-wing, anti-government guerrilla armies, and the right-wing, paramilitary forces fighting against the guerrillas.

Colombia's guerrillas have been referred to as the "peasants' whip." Their traditional source of income came initially from extorting cattle ranchers, but as the ranchers became desperate, they began selling their lands to willing and increasingly wealthy narcotraffickers. The narcotraffickers bought the land because they worked with and lived in the same areas as the guerrillas, and did not think they would be targeted by them. The guerrillas were associates in the narcotrafficking business and the land they held overlapped more than seventy percent with areas occupied by narcotraffickers.

54 Id.
55 Bomba de tiempo, supra note 46, at 33.
56 THOUMI, supra note 35, at 325.
57 See id.
58 Gómez, supra note 47, at 259.
59 Id. at 259.
60 See id. at 260.
61 Id.
At first, this was a fine arrangement. The drug traffickers were able to conduct their operations in territories largely free from government intervention and control, and the guerrillas benefited from the bonanza of money flowing into Colombia from a growing international drug trade. However, once the guerrillas put pressure on the narcotraffickers to help with their cause, the traffickers’ responded by creating private armies who were happily supported by cattle ranchers that had not yet sold their property.

When the narcotraffickers took over ranching lands, especially in the Magdalena Medio and Atlantic coast, they began planting illegal crops, such as coca. The guerrillas seized this opportunity and imposed a tax on the narcotraffickers to secure the coca crops and to ensure that the necessary chemicals needed for growing and processing the coca could get through to the traffickers.

1. The FARC

The Fuerzas Armadas Revolucionarios de Colombia ("FARC"), or Revolutionary Armed Forces of Colombia, originated in 1947, when the central committee of the Communist party agreed to organize a self-defense group against the conservative regime of Ospina Pérez. FARC was tightly linked to Colombian peasants, their chief supporters. This self-defense group settled in the central cordillera of the Andes, in the Serranía de la Macarena, an area in southern Colombia so pristine as to have been designated

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62 Id. at 261.
63 Id. at 260-61.
64 Gómez, supra note 47, at 298.
65 Id. at 260, 298.
67 “Serranía de la Macarena National Park (IUCN category II), located in the south of the region, consists of 630,000 ha. The Park has different ecosystems including, savannas, dry forests, tropical lowland forest, and montane forests.” Apure Villavicencio Dry Forests (NT0201), WORLD WILDLIFE FEDERATION, at http://www.worldwildlife.org/wildworld/profiles/terrestrial/nt/nt0201_full.html (last visited Oct. 10, 2004).
a Reserva de la Humanidad (literally “Reserve for the Humanity”) or Wildlife Preserve.\textsuperscript{68} The evolving guerrilla band later consolidated as a guerrilla group and penetrated the jungle areas to make it very difficult and expensive for the government to combat.\textsuperscript{69} FARC became the state and the law in the Macarena region, free from governmental intervention.\textsuperscript{70}

According to a peasant who lived in the region, the Macarena “was a paradise. Never in another place, have I seen so many birds, flowers and fish. It had a lot of hunting, fishing, plantain, yucca, and land. We used to live in peace, work hard. We didn’t know a guerrilla. Only at the end of the decade [1960s], the first ones started showing up.”\textsuperscript{71}

The narcotraffickers that were chased out by the government from the Atlantic coast eventually settled in Macarena. At the beginning, the narcotraffickers maintained the control, but the guerrillas intervened to impose order on the “wild west mentality” of stealing, violence, prostitution, and gambling that the traffickers brought with them.\textsuperscript{72} The guerrillas demanded that for each hectare of coca planted, the narcotraffickers “had to plant three hectares of rice, corn, and plantain.”\textsuperscript{73} FARC convinced peasants to help the narcotraffickers plant marijuana and began charging a tax on the production, requiring the peasants to present their

\textsuperscript{68} Un Robo de Gallinas o una Pelea Matrimonial son Casos que Soluciona la Subversión, CAMBIO, Oct. 5, 1998, at 21. The Macarena reserve covers five municipalities and is important because of its biodiversity.

The Macarena is the convergence point of six major ecological and geological forces, each exerting its own unique pressure on the local flora and fauna. The end result is a high rate of mutation. The Sierra de la Macarena has been called a biological hothouse. And this biological hothouse is on fire. The Sierra de la Macarena is in danger of being burnt away. This singular world with a huge warehouse of biodiversity waiting to be unlocked is about to be lost forever.


\textsuperscript{69} See Second Report, supra note 66.

\textsuperscript{70} See Gómez, supra note 47, at 260, 298.

\textsuperscript{71} Plinio Apulcyo Mendoza, Pastrana nos entregó, CAMBIO, July 12, 1999, at 39 (quoting Jose, who lived in the Macarena for thirty-five years before becoming displaced by FARC).

\textsuperscript{72} Gómez, supra note 47, at 310.

\textsuperscript{73} Id. at 311-12.
accountings on the crops they had produced. When the narco-traffickers began shifting to coca crops, FARC began imposing a tax on the precursors coming upriver into the area, and trying to control the price of the coca base processed locally. Next, FARC began to tax each kilo of base produced, taxing the growers at ten percent and the buyers at fifteen percent. They then began providing logistical support and protection to the drug labs and clandestine airfields that the peasants constructed for the narco-traffickers throughout Macarena. These operations caused significant destruction to the environment. One airfield was 1,700 meters long and 40 meters wide, illuminated for night landings, capable of handling aircraft as large as DC-6 and C-130 cargo planes, and was surrounded by twenty-five drug labs.

Without the involvement of FARC, the success of the drug operations in the region would have been impossible, and by the end of the 1980s, FARC was very strong, wealthy, and in command in the region. The peace offered to FARC by the Betancur Administration in the mid-1980s gave them the “giant step” they needed—the freedom of movement throughout the region and the ability to acquire more wealth to purchase high-quality arms and recruit many more combatants.

Years later, President Andres Pastrana exacerbated Colombia’s problems in his peace overtures to FARC. Pastrana’s mistake was to give FARC the Macarena as part of a demilitarized zone. This “grant” allowed FARC to consolidate its operations and gain territorial control over an area of Colombia roughly the size

74 Mendoza, supra note 71, at 39.
75 The coca seeds, from Peru and Bolivia, were spread from the air onto the plains of the Yári and from there were distributed to Caquetá, Ariari, Guariare, and part of Vichada. Id. at 40. Biodiversity in these areas was among the most sensitive in Colombia. See generally Julio Betancur & W. John Kress, Distribución Geográfica y Altitudinal del Género Heliconia (Helioconiaceae) en Colombia, in BIODIVERSITY AND CONSERVATION OF NEOTROPICAL MONTANE FORESTS 513 (Steven P. Churchill ed., 1995).
76 Gómez, supra note 47, at 260, 312.
77 Mendoza, supra note 71, at 40.
78 Id. at 39.
79 Gómez, supra note 47, at 314.
80 Id. at 312.
81 Mendoza, supra note 71, at 40.
82 Id. at 41.
of Switzerland.\textsuperscript{83} FARC's unchecked hegemony amplified the environmental damage, degraded humanitarian conditions, and exacerbated Colombia's national security problems. This unrestricted freedom allowed what had begun as a low-intensity conflict to escalate into a full-scale internal armed conflict.\textsuperscript{84} A peasant who left Macarena stated, "[w]e never imagined that President Pastrana himself would give us to the guerrillas. One thing was to have the guerrillas close, paying them taxes, aiding them in what they demand, and it was something very different to be under their exclusive authority."\textsuperscript{85}

From Macarena, FARC multiplied into numerous fronts around the country. Front 53 founded its own town named Pueblo Loco, or Crazy Town, which mobilized narcotrafficking operations and allowed the free ingress of precursors into the region.\textsuperscript{86} "The guerrillas became owners not only of the territory, but also of our land and our lives. The peasants even had to request permission to sell their animals."\textsuperscript{87}

The humanitarian crisis of the region was also caused by FARC and abetted by Pastrana’s ill-conceived domestic policies. First, FARC committed many assassinations and caused disappearances.\textsuperscript{88} They also implemented a system of mandatory service; individuals between ages eighteen and thirty-five years had to serve in FARC ranks, while those older than thirty-five had

\textsuperscript{83} For a critical discussion of the Pastrana’s failed peace process with FARC, see Luz E. Nagle, \textit{Plan Colombia: Reality of the Colombian Crisis and Implications for Hemispheric Security}, Special Series on Shaping the Regional Security Environment in Latin America, Strategic Studies Institute, 2002, at 10-11.

\textsuperscript{84} For an examination of several questions surrounding the concept of internal armed conflict in Colombia, see EDUARDO POSADA CARBÓ, \textit{GUERRA CIVIL?: EL LENGUAJE DEL CONFLICTO EN COLOMBIA} 38 (2001). According to Posada, the usage of the term “civil war” to describe the Colombian situation confuses more than clarifies the nature of the conflict in Colombia. “We are not here in front of a polarized community.... The illegal groups do not represent high percentages of the national population. Most Colombians do not identify themselves with the illegal groups.” \textit{Id.}

\textsuperscript{85} Mendoza, \textit{supra} note 71, at 41 (quoting Jose, a peasant who lived in the Macarena).

\textsuperscript{86} \textit{Id.}

\textsuperscript{87} \textit{Id.}

\textsuperscript{88} \textit{Id.}
to serve in a communications system throughout the region. FARC caused further environmental destruction by building roads through pristine ecosystems, "with government machinery." The roads were designed to transport drugs and provide corridors for rapid escape.

One commentator noted, "[w]hat cannot be forgiven of the FARC is the crime against the nation that they have committed when allowing them to sack and destroy the Sierra Macarena ecosystem, unique in the world." FARC has systematically destroyed the "Reserves of Humanity."

2. ELN

In 1964, FARC dissidents created the Ejército de Liberación Nacional ("ELN"), or the Army of National Liberation. ELN began as a small and "very inflexible" group, most likely "as a result of the combination of a Marxist ideology and the fanatic and messianic elements of religious origin." The group later acquired the support of some labor sectors in the Santander Department, many university students, and some radical Catholic priests.

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90 Id.
91 Mendoza, supra note 71, at 41.
92 Gómez, supra note 47, at 315.
93 Id.
94 Second Report, supra note 66.
95 Id.
96 ELN was joined by many students and intellectuals who had broken with the pro-Soviet Partido Comunista de Colombia ("PCC"), or Communist Party of Colombia, and embraced the ideological sentiments and financial support of the Castro revolution in Cuba. Haydee Marin, Terrorist Groups Inspired by Fidel Castro and Che Guevara, La Nueva Cuba, at http://www.lanuevacuba.com/archivo/notic-01-10-911.htm (last visited Oct. 10, 2004).
97 One of ELN's most notable early leaders was the dissident Roman Catholic priest, Camilo Torres, who, by the mid-1960s, was a prominent figure in the liberation theology movement sweeping through Latin America. Following Torres' death in combat in 1966, a defrocked Spanish priest with ties to the Basque separatist movement, Manuel Pérez, assumed leadership of ELN. Momentos en la vida del Comandante Manuel Pérez, at http://www.nodo50.org/patrialibre/identidad/se_melvd.html (last visited Oct. 10, 2004) [hereinafter Momentos]. At the beginning of 1970s, Pérez was joined by two more Spanish priests, Domingo Laino and Jose Antonio Jimenez. MARÍA TERESA RONDEROS, RETRATOS DEL PODER 75 (2002). For a description of ELN's birth by its actual Commander, Nicolas Rodriguez Bautista, a.k.a. "Gabino," see id. at 65-72.
Since almost the beginning, ELN has been under the leadership of two priests, Camilo Torres and Manuel Pérez. Some claim that under their leadership and due to the strength of their own moral convictions against drug use, ELN managed to stay out of drug trafficking, and was able to concentrate its revenue-generating activities on the kidnapping and extortion of wealthy Colombians and foreign business entities.

ELN struggled throughout the years due to great disidence in the ranks, intolerance by commanders, lack of money, and crippling defeats on the battlefield. By 1977, it nearly ceased to exist. However, ELN was reconstituted when it gained peasant support through an indoctrination process of “preaching the communist revolution” and formed several fronts in different regions of the country. By the end of the 1970s, ELN gained control of the Consejos de Liberación de Arauca wing and formed the Frente Lain (Lain Front). This Front became the wealthiest ELN front because of its ability to extort oil companies in the area. The $20 million extorted from the Mannesmann Company to prevent ELN from blowing up the Cano-Limon pipeline was the key to ELN’s resurrection. This money financed the group for a decade. Currently, roughly 5,000 ELN combatants are divided into cells throughout the country.

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96 Second Report, supra note 66. Camilo Torres was Colombian and Manuel Pérez was Spanish. Id.
99 There is no consensus as to when ELN actually became involved in drug trafficking. One explanation may be the amount of dissent that existed within the organization. For information on ELN’s exclusion from the drug business due to the philosophical preferences of its leader priest, see Momentos, supra note 97. For information on ELN cells’ involvement in the drug business during the 1980’s in the Catatumbo region, see Colombia Objectiva, El ELN y las FARC Intimidan a los Indígenas Motilón-Bari para Sembrar Hoja de Coca y Exportar Cocaina, at http://www.geocities.com/CapitolHill/Lobby/6882/tres.html (last visited Oct. 10, 2004) [hereinafter Colombia Objectiva].
100 See RONDONEROS, supra note 97, at 72-82.
101 Id. at 80. Seventy percent of the peasants collaborated with ELN. Id.
102 Id. at 81.
103 Id.
104 Id.
105 Id. at 81-82.
In addition to kidnapping and extortion, ELN entered the drug trafficking business to fund its terrorist operations against the government and foreign commercial entities. Its current military operations continue primarily in the form of acts of sabotage and terrorism against economic targets of opportunity, such as oil, gas, and electric power operations and facilities. In an effort to extort money from multinational and domestic oil companies, ELN has provoked an environmental disaster by repeatedly blowing up oil pipelines that carry oil from inland oil fields to export facilities on the northern coast of Colombia. The humanitarian effect of these attacks is devastating. Many civilians have been killed and many more have been forced to leave their homes. In addition, the oil spills have contaminated thousands of hectares and poisoned hundreds of kilometers of pristine rivers and streams.

3. The Paramilitaries and the Emergence of the AUC

Paramilitarism is not a new phenomenon in Colombia. The Colombian Communist Party created the first self-defense group, which acted as self-defense of the masses to protect peasant victims of army violence. In the mid-1960s and in response to the emergence of violent dissident groups, Colombian President Guillermo Leon Valencia Muñoz issued Decree 3398 during a state of emergency, which became the doctrine of National Security. In 1968, this doctrine became permanent with the enactment of Law 48 of 1968, which

107 Gómez, supra note 47, at 315.
108 Id. at 315-16.
109 Id. at 316.
110 Id. at 315.
111 The XII Congress of the Colombian Communist Party in 1975 adopted the following accord: “Article 1: the self-defense is a popular movement of the masses. The movement embraces all persons whose physic integrity and interests are threatened by the reactionary repression, the greed of the landowners, territorial, economic, politic, ideological and cultural colonization of the Yanqui imperialism.” INTER-AMERICAN COMMISSION ON HUMAN RIGHTS, THIRD REPORT ON THE HUMAN RIGHTS SITUATION IN COLOMBIA OF 1999, ch. IV, at http://www.cidh.oas.org/countryrep/Colom99en/chapter-4.htm (last visited Oct. 10, 2004) [hereinafter THIRD REPORT, CHAPTER IV].
among other provisions allowed for the creation of paramilitary self-defense forces armed and supported by the Ministry of Defense.\textsuperscript{112}

In the late 1970s and in the 1980s the self-defense or paramilitary groups, connected to economic and political sectors in the different areas of Colombia, grew stronger. These groups, which were patronized or accepted by sectors of the State's security forces, sought to defend the interests of certain individuals or groups through violence. They were largely established as a reaction against the violence taking place in rural areas throughout the country, often in the form of kidnappings for ransom. They sought to combat the armed dissident groups which had formed, because those groups were responsible for most of these kidnappings and other violence. In addition, the armed dissident groups had begun to impose war taxes, known as “vacunas” (“vaccinations”) in Colombia, which threatened the economic situation of many medium and large landowners and agro-businesses in the countryside. The paramilitaries thus necessarily had a counter-insurgency motivation. As a result, they formed ties with the Colombian military.\textsuperscript{113}

The self-defense groups multiplied due to the power of the guerrilla insurgency and the strong emergence of narcotrafficking.\textsuperscript{114} During the 1980s, the first paramilitary group to gain notoriety in Colombia’s armed conflict was the group Muerte a Secuestradores (“MAS”), or Death to Kidnappers, formed by the notorious Medellín drug cartel\textsuperscript{115} to prevent kidnappings of


\textsuperscript{113} Id.

\textsuperscript{114} For further discussion on the different incarnations of self-defense forces in Colombia, see Nazih Richani, \textit{The Paramilitary Connection}, 34 NACLA REPORT ON THE AMERICAS 38, 40-41 (Sept. 2000).

\textsuperscript{115} The Medellín Cartel formed in the late 1970s as a joint venture among drug
family members.\textsuperscript{116} MAS became the narcotraffickers’ private military arm, primarily in the Magdalena Medio region of central Colombia, a strategically vital area for major drug smuggling.\textsuperscript{117} Because the narcotraffickers were the largest landholders, FARC had been harassing them for some time.\textsuperscript{118} MAS set out to subdue guerrilla activities in the region and did a rather thorough job. In the process, MAS gained \textit{de facto} territorial control of the Magdalena Medio region.\textsuperscript{119} By the late 1980s, however, the Medellín Cartel was in an all-out war against government forces and was soon eliminated from the scene.\textsuperscript{120} With the downfall of the drug lords imminent, the guerrillas and the paramilitaries seized the opportunity to enter the illegal drug enterprise. This effort provided them with huge revenue streams, which they never could have realized from kidnapping and extortion, prestige in the world of organized crime, access to the well-established international smuggling and money laundering corridors, and a high-profit product that could be traded for the services of terrorist groups around the world.\textsuperscript{121}

The paramilitaries, now under the leadership of the iconoclastic anti-guerrilla zealot Carlos Castaño, assumed a new identity,
forming a potent nationwide fighting force called the Auto Defensas Unidas de Colombia ("AUC"), or the United Armed Forces of Colombia. AUC's primary interests became confronting and exterminating guerrilla groups, namely ELN and FARC, and gaining absolute hegemony and control over as much of Colombia as possible. Along the way, they became involved in drug production and trafficking, and emerged as a major player in the international illegal drug trade.

In certain areas of the nation, AUC eradicated ELN and FARC. AUC terrorized the countryside, displaced hundreds of thousands of rural poor, and seized or purchased large tracts of prime land at fire-sale prices. They also established what have essentially become feudal fiefdoms controlled by warlords and their private armies throughout Colombia, especially in the northern regions.

The increase in the size of AUC fighting forces has mirrored the growth of FARC, and as of 2000, AUC claimed to have more than 11,000 personnel, 8,000 combatants, and 2,000 urban and rural intelligence militias, dispersed into 32 units throughout Colombia. At least seventy percent of all AUC revenues are obtained from trafficking of illegal drugs. The millions of dollars realized from the drug trade gave AUC the capacity to field a well-trained, well-provisioned, and highly disciplined fighting force. Indeed, "the intensification of the Colombian armed conflict has been the main cause behind the expansion of illicit crops in Colombia."
When not fighting against guerrillas, AUC has offered security services for a new generation of drug traffickers, composed of much smaller but far more numerous "minicartels," by protecting their land and property from guerrilla incursions. AUC has also entered into regional agreements to protect legitimate businesses and executives from FARC extortion and kidnapping. Additionally, they draw income from charging a "tax" to ranchers for protection from FARC incursions. AUC levies the tax on a sliding scale based on a set number of pesos per hectare of land. The taxes bring into AUC coffers of more than 6.6 billion pesos a month. In one eighteen-month span, AUC earned more than five million dollars.

AUC also taxes the peasants who cultivate coca and the narcotraffickers who buy coca paste in AUC-held territories. From this tax revenue, AUC obtained two billion pesos. FARC employs similar tactics to fleece the growers and manufacturers in their zones of control. In areas of southern Colombia under coca cultivation, AUC wages a fierce war against FARC while charging the highest taxes to the coca producers. In Guaviare, Meta, Caqueta, and Putumayo, coca producers pay 1.5 million pesos. In 2000, AUC’s exploitation of coca crops in Tolima, Cauca and Antioquia generated an annual income close to 2.1 million dollars, or 4.2 billion pesos. AUC has also benefited from FARC’s strategy of

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130 Las Finanzas de los Paras, supra note 116, at 18. AUC’s main areas of operations are in the departments of Sinú, Cesar, Cordoba, and Sucre. Id.
131 The paramilitaries are very wealthy and have more economic possibilities because they are supported by the mafias and influential politicians. Pablo Tottay, Commentario, FARC y Población Indígena: Una Muestra de Relación con la Población Civil, in LAS VERDADERAS INTENCIONES DE LAS FARC, supra note 42, at 198.
132 Las Finanzas de los Paras, supra note 116, at 18.
134 Las Finanzas de los Paras, supra note 116, at 18.
135 Id. AUC presented a project with the amount of men and armament needs and costs. According to the DEA, Carlos Castaño and the heads of the Norte del Valle cartel were to negotiate a paramilitary group to be supported with the money made by the trafficking of cocaine. Id. at 19.
136 Id. at 18.
137 Id.
138 Id.
139 Las Finanzas de los Paras, supra note 116, at 18.
taxing and killing the coca growers if they do not pay up because the growers call AUC to protect them from FARC. This began when a drug trafficker in Caqueta was killed after being accused by FARC of stealing 1.5 billion pesos in “taxes.” The murder led other drug traffickers to ask AUC for protection. In the Llanos Orientales, AUC completely displaced FARC and negotiated a six percent protection “tax” for coca growers and producers, four percent less than FARC had imposed.

AUC cultivates other lucrative sources of income by imposing a protection tax on several sectors of the formal economy, including merchants, finance houses, cattle ranchers, the timber industry, and the commercial trucking and transportation industry. In 2000, for example, AUC derived 12 million dollars from these groups. Multinationals and banana exporters also pay a protection tax to the paramilitaries. For instance, in the banana region of Urabá, in northwestern Colombia, AUC levies a protection tax of fifty cents for every box of bananas valued at eighteen dollars. Considering that this banana-growing region exports twenty-one million boxes of bananas a year, the tax amounts to a considerable income for the paramilitaries. However, the export company denies that they pay a protection tax to AUC.

Narcotrafficking revenues going to AUC have had a worrisome impact on land distribution and ownership throughout the national territory. With the paramilitary’s gains and territorial advances, the land is being redistributed as if a type of land reform were taking place. Where paramilitary warlords and their private armies have yet to acquire large tracts of land, they have

140 Id.
141 Id.
142 Id.
143 Id. at 14.
144 Id.
145 Las Finanzas de los Paras, supra note 116, at 14. AUC revenues in 2000 from these industries and from taxes paid by narcotraffickers in Valle, Tolima and Antioquia totaled $14.4 million. Id.
146 Id. at 19.
147 Id.
148 Id.
protected and aided narcotraffickers in purchasing land or assuming control of abandoned land. In 2000, it was estimated that under the collusion and protection of AUC paramilitary units, narcotraffickers had purchased four million hectares of land dispersed throughout 409 municipalities.  

Paramilitary groups have a set strategy to acquire land that forces peasants to sell or abandon their properties. This strategy is comprised of four basic steps: detect an economic zone under guerrilla control, take over and dominate it, expel its inhabitants, and increase the value of the land with the arrival of ranchers and investors who will form the new social and economic structure. If the paramilitary warlords do not obtain direct ownership, the peasants may receive a percentage of the increased value in the property in exchange for relinquishing their land. In Urabá, AUC has performed a “land reform” of 15,000 hectares of land that produced no less than 10,000 boxes of bananas which were taken through roads built by FARC. This strategy was employed in the Magdalena Medio region of north central Colombia, where paramilitaries assumed ownership of vast amounts of land ostensibly abandoned by 800,000 individuals displaced by political violence. With regard to the overtaking of coca-growing regions, estimates for 2000 suggest that AUC controlled twenty-five percent of the 105,000 hectares of coca under cultivation, while the guerrillas collectively controlled the other seventy-five percent.

This forced takeover of Colombian land results in three illegal armed groups systematically destroying both the environment and the social fabric of the nation. The guerrillas are at war against the state and the paramilitaries, and the paramilitaries are obsessed with annihilating the guerrillas and acquiring as much rural territory as possible, regardless of whether the Colombian state approves. Each group is financed primarily by their

149 Id. at 19 (citing Camilo Echandia, El Conflicto Armado y las Manifestaciones de Violencia en las Regiones de Colombia).
150 Las Finanzas de los Paras, supra note 116, at 18.
151 Id. at 20.
152 Id. (citing a study conducted by Professor Fernando Cubides).
153 Id. at 21.
respective involvement in drug trafficking and all three are responsible for the environmental and humanitarian disasters occurring in Colombia.

In response to the attacks against the environment and its people, the Colombian government has entered into international agreements and enacted domestic laws to protect the environment and its rural inhabitants. These laws and regulations will be examined below.

III. INTERNATIONAL ENVIRONMENTAL LAW AND INTERNAL ARMED CONFLICT

Environmental protection gradually entered the evolving discipline of international human rights law to the extent that it came to be recognized that the fundamental human right to personal growth and happiness depended upon a healthy, natural, and undamaged environment. Some human rights treaties recognize the protection of collective rights in addition to the protection of individual rights.

One could argue that the independent right to a decent environment has not yet become part of international law, and that environmental law treaties do not contain human rights protections. Yet “some environmental treaties contain provisions that expressly aim to protect the environment in order to ‘safeguard human health,’ or to secure ‘the health of the coastal population.’”


155 Collective rights lack the possibility of individual enforcement. See Vöneky, supra note 154, at 201.

156 Id.
Bodies of law applicable to internal armed conflict include International Humanitarian Law ("IHL"), international environmental law, and human rights law. Although IHL is explicit on environmental impacts, enforcement is problematic during times of internal armed conflicts. It is useful at this point, however, to briefly discuss the environmental rules applicable to international armed conflict, the inadequacy of IHL in environmental protection, and other rules that do not specifically protect the environment, but provide a basis for environmental preservation and protection during an internal armed conflict.

A. International Armed Conflict and the Environment

IHL is part of a rapidly growing and evolving corpus of international law, treaties, customs, and practices concerned with the impact of armed conflict on the environment. The focus of IHL is to protect innocent victims, to afford certain rights upon the combatants, and to establish certain protocols for redress. IHL concedes that environmental damages can be inevitable in armed conflict and aims "not to prevent damage altogether, but rather to

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157 International Humanitarian Law, also referred to as the "law of armed conflict" or the "law of war", is the body of laws and principles that seeks to save lives and alleviate suffering of combatants and noncombatants during armed conflicts. Its principal legal documents are the Geneva Conventions of 1949, four treaties signed by almost all states (nations) around the world. The Geneva Conventions specifically protect members of the armed forces who are wounded, sick or shipwrecked, prisoners of war, and civilians.

Red Cross Glossary of Terms, at http://www.redcross.org/services/intl/0,1082,0_161_00.html (last visited Oct. 12, 2004).

158 Jay Austin and Carl E. Bruch consider "peacetime environmental law" treaties as relevant bodies of law that "require further development and some creative thinking before [they] can be applied to wartime settings." See Jay E. Austin & Carl E. Bruch, Legal Mechanisms for Addressing Wartime Damage to Tropical Forests, in War and Tropical Forests: Conservation in Areas of Armed Conflict, supra note 2, at 175.

limit it to a level deemed tolerable.” While there are several norms applicable to environmental constraints in an international armed conflict, the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (“ENMOD”) and the Protocol Additional to the Geneva Conventions of 1949 (“Protocol I”), are particularly noteworthy.

ENMOD focuses on the use of the environment as a weapon by the armed forces and not on damage to the environment per se. ENMOD is intended to protect against threats, such as changes in weather and climate patterns, earthquakes, and ocean currents, and against an upset in the ecological balance of a region. In Article I, the Convention prohibits “military or any other hostile use of environmental modification techniques having widespread, long lasting or severe effects as the means of destruction, damage or injury to any other State Party.” However, the interpretation of the terms “widespread, long-lasting or severe effects,” limits the value of the Convention.

Like ENMOD, Protocol I’s application to only the most severe damages limits its effect. Protocol I applies to international armed conflicts and includes provisions protecting the civilian

161 Bouvier, supra note 154.
Articles 35 and 55 specifically address issues of damage to the environment.\(^\text{169}\) Article 35(3) prohibits the use of "methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment."\(^\text{170}\) Under Protocol I, a violation of international law occurs when all three conditions are met.\(^\text{172}\) Article 55 is part of a group of provisions in the Protocol under the heading "Civilian Objects" that addresses the protection of civilians in an armed conflict:

1. Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population.
2. Attacks against the natural environment by way of reprisals are prohibited.\(^\text{173}\)

The environmental damage caused during the Persian Gulf War raised the issue of tolerable damages, if acts of war against the environment, such as the sabotaging of hundreds of oil wells, "could wreak such large-scale destruction as to render illusory the protection afforded civilians under IHL."\(^\text{174}\) Another issue was the application of IHL rules if disastrous environmental damage might "seriously hamper or even prevent the implementation of provisions to protect the victims of armed conflict (the wounded, the sick, prisoners of war or civilians)."\(^\text{175}\) IHL demonstrates that,

\(^{169}\) Id.
\(^{170}\) Roberts, supra note 167, at 59.
\(^{171}\) Protocol I, supra note 163, at 1409.
\(^{173}\) Protocol I, supra note 163, at 1415.
\(^{174}\) Bouvier, supra note 154.
\(^{175}\) Id.
especially in the aftermath of the Gulf War, a link must be established between wartime environmental damage and the protection of human rights during an armed conflict.\textsuperscript{176} Even when humans have been the primary concern of wartime disaster, the environmental consequences and effects on the civilian population have illustrated that environmental calamities also tragically affect humans. “Incidental or intentional environmental harm can become so severe that it harms human health, especially that of innocent civilians.”\textsuperscript{177} Peacetime environmental treaties affecting and protecting transboundary areas and common goods remain in effect during armed conflict when they fulfill two conditions. Such treaties must compel parties to protect global environmental resources as such, offering no immediate gain to the contracting state fulfilling its obligation, and they must explicitly promote the interest of the states as a global community. According to legal scholar Silja Vöneky, peacetime environmental treaties are sufficiently similar to human rights treaties to justify their application during wartime.\textsuperscript{178} These treaties include the Convention on Biological Diversity, the Vienna Convention for the Protection of the Ozone Layer, the Convention on Climate Change, and others.\textsuperscript{179}

International environmental law, conceived during peacetime, contains aspects that can be adopted in response to transboundary environmental damages, and can fill shortcomings of

\textsuperscript{176} Such a linkage is being established by a special rapporteur of the Kuwait Commission on Human Rights. The Report on the Situation of Human Rights in Kuwait under Iraqi Occupation states that

\textit{[w]arfare often affects the natural environment; such consequences do not, \textit{per se} constitute human rights violations. However, \ldots it can be concluded that not only in peacetime but also in times of armed conflict, the deliberate causing of large-scale environmental damage which severely affects the health of a considerable proportion of the population concerned, or creates risks for the health of future generations, amounts to a serious violation of the right to the enjoyment of the highest attainable standard of health as embodied in art. 12 of the International Covenant on Economic, Social and Cultural Rights.}

Vöneky, \textit{supra} note 154, at 201:

\textsuperscript{177} Bruch, \textit{Existing and Emerging, supra} note 168, at 5.

\textsuperscript{178} Vöneky, \textit{supra} note 154, at 213 (noting that human rights treaties apply to belligerent states).

\textsuperscript{179} \textit{Id.} at 225.
domestic environmental legislation to address the transnational effects of environmental injury. According to Vöneky, four groups of peacetime treaties bind state parties even during armed conflict:

(1) treaties and customary rules protecting the environment that expressly provide for continuance during war;
(2) treaties and customary rules protecting the environment that are compatible with the maintenance of war;
(3) *ius cogens* rules and obligations *erga omnes* protecting the environment;
and, in analogy to human rights treaties and treaties providing objective regimes:
(4) treaties and customary rules that oblige the states to protect the environment in the interest of the state community as a whole.180

Customary international environmental law relies on the notion that "each state has a duty not to allow its territory to be used so as to injure that of another."181 Yet, during the heat of a conflict, environmental damages are excused as the result of military necessity, at which point the principles of proportionality will determine the extent to which a state should be held accountable for environmental damages and for the impact on populations.182 A recent example is the United States Environmental Protection Agency's decrease in efforts to make the United States Air Force address the expulsion of ozone-depleting gases from military aircraft.183

Generally, environmental protections are addressed solely in legislation that specifically addresses environmental issues.

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180 Id. at 224-25.
182 Id. at 17-18.
However, environmental protection has gradually entered the evolving discipline of international human rights law. Environmental problems prevent the effective exercise and enjoyment of basic human rights.

Water and air pollution, accumulations of solid and hazardous wastes, soil degradation and deforestation prevent many people from securing the minimum requirements for health and survival. Whether or not a basic human 'right to the environment' exists, a safe and ecologically balanced environment is necessary for the realization of all basic human rights.\textsuperscript{184}

Human rights treaties have included various protections for individuals that are applicable during both peace and wartime.\textsuperscript{185} Additionally, certain human rights provisions relate to the protection of individuals in the context of providing a healthy environment. For instance, Article 24 of the 1981 African Charter on Human and People's Rights, states that "[a]ll peoples shall have the right to a general satisfactory environment favorable to their development."\textsuperscript{186} Article 11 of the "Protocol of San Salvador", states that "everyone shall have the right to live in a healthy environment and to have access to basic public services" and "the States Parties shall promote the protection, preservation, and improvement of the Environment."\textsuperscript{187}

If the principles expressed in these international conventions stress the responsibility of states to protect the environment and populations affected, how can such principles be applicable to the internal conflict in Colombia? The Geneva Convention provides the foundation upon which to begin.

\textsuperscript{185} Vöneky, supra note 154, at 201.
B. International Humanitarian Law and the Colombian Conflict

In any non-international armed conflict, the applicable rules are those stated in Common Article 3 of the four 1949 Geneva Conventions,\(^{188}\) Protocol II of 1977,\(^{189}\) and Article 8 of the Rome Statute of the International Criminal Court.\(^{190}\) Common Article 3 sets a minimum standard of humane treatment from which the parties to the conflict should not depart.\(^{191}\) The application of Protocol II is more stringent than Article 3 and applies to the armed forces participating in the conflict and safeguarding those no longer actively engaged in the confrontation.\(^{192}\)

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\(^{188}\) Common Article 3 is the only provision of the Geneva Conventions that explicitly applies to internal armed conflicts. Common Article 3, section 1, states that

\[
\text{[i]n the case of armed conflict not of an international character occurring in the territory of one of the High Contracting Parties, each Party to the conflict shall be bound to apply, as a minimum, the following provisions:}
\]

1. Persons taking no active part in the hostilities, including members of armed forces who had laid down their arms and those placed \textit{hors de combat} by sickness, wounds, detention, or any other cause, shall in all circumstances be treated humanely, without any adverse distinction founded on race, color, religion or faith, sex, birth or wealth, or any other similar criteria.

To this end the following acts are and shall remain prohibited at any time and in any place whatsoever with respect to the above-mentioned persons: (a) violence to life and person, in particular murder of all kinds, mutilation, cruel treatment and torture; (b) taking of hostages; (c) outrages upon personal dignity, in particular humiliating and degrading treatment; (d) the passing of sentences and the carrying out of executions without previous judgment pronounced by a regularly constituted court, affording all the judicial guarantees which are recognized as indispensable by civilized peoples.

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\(^{192}\) \textit{Id.}
Statute applies "when there is protracted armed conflict between governmental authorities and organized armed groups or between such groups."\(^{193}\)

Protocol II, Article 1(1), defines internal conflicts as those taking place

in the territory of a High Contracting Party between its armed forces and dissident armed forces or other organized armed groups which, under responsible command, exercise such control over a part of its territory as to enable them to carry out sustained and concerted military operations and to implement this Protocol.\(^{194}\)

In Colombia, the guerrillas and AUC have a command structure, exert control over part of the territory, and have sufficiently intense activities that cannot be dismissed as isolated and sporadic acts of violence. Protocol II should therefore apply to this type of command.

Colombia ratified the four Geneva Conventions on August 11, 1961, and acceded to Protocol II on August 14, 1995.\(^{195}\) The principle of State sovereignty makes the application of the rules of internal armed conflict difficult in Colombia. In the decades prior to the adoption of Protocol II, the government depicted the political crisis in Colombia as little more than an ongoing series of internal disturbances with occasional acts of violence that did not meet the conditions necessary for the application of Protocol II.\(^{196}\)

\(^{193}\) *Rome Statute*, supra note 190.

\(^{194}\) *Protocol II*, supra note 189.


\(^{196}\) Colombia explicitly recognized the existence of its internal conflict, its partaking in the conflict and the applicability of common Article 3 and Protocol II concerning the Protection of Victims of Non-International Armed Conflicts, as well as other customary law rules and principles governing internal armed conflicts. ELN expressly acknowledged to be bound by the 1949 Geneva Conventions and Protocol II. *See Third Report, Chapter IV, supra note 111.*
The Colombian government also believed that Protocol II, if embraced, would undermine the legitimacy of the State, and of greater concern, upgrade the status of the guerrillas to that of belligerents. Moreover, the military and civilian allies in the government maintained that ratification of Protocol II was unnecessary and inappropriate because its adoption would open the door to international intervention, including the possibility of intervention on the side of the guerrillas. As the crisis persisted and intensified heading into the 1980s, however, internal pressures on the government by the guerrillas and the channeling of resources into fighting an increasingly violent campaign against international drug traffickers forced the ratification of the Protocols.

C. Law of Internal Armed Conflict and Environmental Damage

The rules protecting the environment during internal armed conflict are less developed than those governing international

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interviews with Human Rights Watch, "guerrillas" claimed to support humanitarian standards but stated that "they do not accept Protocol II since it was not negotiated directly with them." Human Rights Watch, War without Quarter: Colombia and International Humanitarian Law, ch. II, at http://www.hrw.org/reports98/colombia/Colom989-03.htm#P457_59724 (last visited Oct. 12, 2004) [hereinafter War Without Quarter, Chapter II]. FARC considers "Protocol II and Common Article 3 'open to interpretation.'" Human Rights Watch, War without Quarter: Colombia and International Humanitarian Law, ch. V, at http://www.hrw.org/reports98/colombia/Colom989-05.htm#P1341_318397 (last visited Nov. 8, 2004) [hereinafter War Without Quarter, Chapter V]. AUC, through its leader, Carlos Castaño, "stated a willingness to pledge his forces to respect the laws of war, but qualifies that support by claiming that Colombia needs a 'creole' version of international humanitarian law, adapted to Colombia's irregular warfare and specifically allowing the execution of combatants hors de combat." War Without Quarter, Chapter II, supra.

199 Carrillo-Suarez, supra note 197, at 48.
armed conflict. Accordng to Bouvier, "[n]one of the rules of IHL applicable to [internal armed conflicts] provide specifically for protection of the environment."\textsuperscript{201}

While the legal framework applicable to internal armed conflict does not explicitly address the environment, some provisions offer ways for sanctioning environmental damage. Common Article 3 does not specifically address environmental damage, but "certain instances of environmental warfare—for example, poison gas, landmines, and scorched earth practices—may cause 'violence to life and person.' This arguably would violate Article 3(1)(a), but only to the extent that the anthropomorphic standards applied . . . ."\textsuperscript{202}

Protocol II also lacks specific environmental protections. However, its intent is not to protect the environment for the environment's sake, but rather to reinforce the anthropocentric view that the environment must be protected in order to prevent loss of livelihood and natural resources essential to sustaining a population subjected to the vagaries of internal armed conflict. In this context, some provisions can be invoked to address intentional environmental damages caused by internal armed groups, such as tactics employed to force rural and indigenous population displacements. Articles 14, 15, and 17 of Protocol II arguably afford indirect protection to the environment.\textsuperscript{203} Article 14 states that

\begin{quote}
[s]tarvation of civilians as a method of combat is prohibited. It is therefore prohibited to attack, destroy, remove or render useless, for that purpose, objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for
\end{quote}


\textsuperscript{201} Bouvier, supra note 154.

\textsuperscript{202} Bruch, \textit{All's not Fair}, supra note 172, at 709-10.

\textsuperscript{203} Id. at 714.
the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works. 204

Article 15 on the “[p]rotection of works and installations containing dangerous forces,” states that “works or installations containing dangerous forces, namely dams, dykes and nuclear electrical generating stations, shall not be made the object of attack, even where these objects are military objectives, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population.” 205 Prohibitions against the forced movement of civilians are covered in Article 17. 206

The Rome Statute offers another possible method of sanctioning environmental damage due to internal armed conflicts. Article 8(2)(c) bans “serious violations” of Common Article 3 of the Geneva Convention. 207 Under this provision, commanders and troops can be held criminally liable for the use of weapons and practices with environmental impacts that cause “[v]iolence to life and persons.” 208 Under Article 8(2)(e), war crimes are “serious violations of the laws and customs applicable in armed conflicts not of an international character,” 209 such as intentional attacks on noncombatants, destruction of historic monuments and buildings of cultural significance, 210 and intentional pillaging. 211 Other crimes include “[o]rdering the displacement of the civilian population for reasons related to the conflict, unless the security of the civilians involved or imperative military reasons so demand,” 212 and “[d]estroying or seizing the property of an adversary unless such destruction or seizure be imperatively demanded by the necessities of the conflict.” 213

204 Protocol II, supra note 189.
205 Id.
206 Id.
207 Rome Statute, supra note 190, art. 8(2)(c).
208 Id., art. 8(2)(c)(i).
209 Id., art. 8(2)(e).
210 Id., art. 8(2)(e)(iv).
211 Id., art. 8(2)(e)(v).
212 Id., art. 8(2)(e)(viii).
213 Rome Statute, supra note 190, art. 8(2)(e)(xii).
IV. COLOMBIA’S IMPLEMENTATION OF ENVIRONMENTAL PROTECTIONS

Laws and regulations governing access to and the use of natural resources during peacetime may be weakened or suspended when armed conflict is present. Were environmental legislation coherent, clear and comprehensive, with solid conservation programs in place and consistent enforcement during peacetime, essential activities to protect the environment would not be so difficult to formulate and maintain during a conflict. It is during such periods of internal commotion that the armed groups advance their illegal enterprises and engage in the pillage of valuable natural resources.

To combat the lack of environmental protection, the Colombian government has enacted legislation, implemented conservation programs, and begun to address sustainable usage of biological diversity. The challenge to the government, however, is that the activities of the illegal armed groups put pressure on the

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214 Steven V. Price, Preface to War and Tropical Forests: Conservation in Areas of Armed Conflict, supra note 2, at xv.
215 During the Peace process in Colombia, FARC increased its stake in the drug trade and used the demilitarized, distention zone to set up not only illegal drug laboratories but airfields and roads to move combatants and drug shipments quickly in and out of the zone. Álvarez, Forests, supra note 23, at 51 (discussing in detail the construction of a road from the distention zone through various national parks and the intent "to facilitate the entry of hostages and re-agents for drug processing into the DMZ"). See also Edgar Téllez et al., Diario Íntimo de un Fracaso: Historia No Contada del Proceso de Paz con las FARC 50 (2002) (discussing the strategic significance of the distention zone to FARC guerrillas).
environment and the State is unable to respond with a cohesive, consistent plan of action or conservation because environmental legislation has been implemented over a period of years in a haphazard manner and without systematic codification.

When new legislation is enacted, it often fails to reference antecedents. For example, the Code of Natural Resources deals with the protection of the environment and natural resources, but fails to incorporate important regulations such as those dealing with environmental impact assessment and licensing, which are found in separate, prior legislation. In addition, protection of biodiversity often focuses more on protecting species rather than their natural habitats, and provisions too often call for plan of completion at a later time, thereby deferring implementation.

The amount of legislation sprinkled throughout the organic law of Colombia and the lack of cross-referencing for much of the law creates conflict and uncertainty over legal requirements and the applicability of norms. Moreover, in spite of Colombia’s Constitution, which recognizes that the nation is a multi-ethnic society, and of legislation protecting the rights of Afro-Colombian

217 See Decree 2811, supra note 216.
218 The Minister of Environment and the Humboldt Institute, along with a number of scientists, issued a series of red books assessing the status of threatened species in Colombia. See, e.g., LIBRO ROJO DE AVES DE COLOMBIA (Luis M. Renjifo et al. eds., 2002) (providing detailed and updated information on 162 threatened bird species, a map of the geographic distribution, and the grade of threat).
219 For instance, Book Three, Section VI, Title I of the Code of Natural Resources, calls for a plan of completion at a later time. Decree 2811, supra note 216.
220 In 1996, under Law 261 of January 23, the Colombian government mandated compilation of environmental laws, but this compilation has yet to occur. Ley 261 de 1996 [Law 261 of 1996] (1996) (Colom.), available at http://www. secretariasenado.gov.co/leyes/L0261_96.htm (last visited Oct. 12, 2004). Areas such as commercial law, foreign investment law, mining law, and others have been consolidated into their own codes, yet it seems that environmental law lacks the stature that these other areas of law possess.
and indigenous populations, such legal rights and protections have been inadequate to deal effectively and fairly with environmental and social issues raised by these groups.\textsuperscript{222} The Government is slow to issue property titles, and access to such lands is often inhibited by the presence of armed groups.\textsuperscript{223} The rights of these minority or underrepresented communities are imperiled because the government either does not care or is unable to enforce protections and constitutional guarantees, such as the prevention of illegal timber harvests, agricultural colonization, and cultivation of crops for the illegal drug trade in remote areas.\textsuperscript{224}

On May 23, 1996, President Ernesto Samper called for bidding on the Atrato-Truand6 Inter-Oceanic canal to begin in 1997.\textsuperscript{225} The estimated cost of the project was 2.33 billion dollars.\textsuperscript{226} On December 13, 1996, under Law 70 of 1993, 1200 people belonging to 217 families in six communities were granted collective title to 61,000 hectares of land within the Truand6 River.\textsuperscript{227} At the same time, however, the first paramilitary incursion into the Truand6 area occurred at Riosucio.\textsuperscript{228} “A joint paramilitary-army operation, using helicopter gunships, bombarded the Afro-Colombian civilian population, with the pretext that they were guerillas.”\textsuperscript{229} Nearly 500

\textsuperscript{222} For an analysis of the multicultural aspects of the Colombian legislation and biological diversity, see DIVERSIDAD BIOLÓGICA Y CULTURAL: RETOS Y PROPUESTAS DE AMERICA LATINA 65 (1999) [hereinafter DIVERSIDAD BIOLÓGICA Y CULTURAL].

\textsuperscript{223} See Ricardo Rocha Garcia, Drug Trafficking and its Impact on Colombia: An Economic Overview, 28 CAN. J. LATIN AM. & CARIBBEAN STUD. 277-304 (2003) (“In Colombia, rural properties tend to have outdated titles that have never been properly registered. This, together with the fact that guerrilla groups often indulge in the extortion of traditional property owners, makes it easy for mafia bosses to acquire large tracts of land.”).

\textsuperscript{224} See Tighe, supra note 17 (stating that ninety percent of indigenous homelands were put under indigenous control while the black population “received less of a fair deal”).

\textsuperscript{225} Marino C. Berrio, The Untold Truth About the Genocide Against Afro-Colombians!, available at http://www.chicagoans.net/afroresources/untold.pdf (May 8, 2002).

\textsuperscript{226} Panama Canal Alternative Study Invited in Colombia, THE XINHUA NEWS AGENCY, Apr. 16, 1997.

\textsuperscript{227} Id.

\textsuperscript{228} Id.

\textsuperscript{229} Id.
people were massacred and another 20,000 people fled the area.\footnote{Id.} In hindsight, it seems likely that this operation was motivated by the need to clear the area for the exploitation of regional environmental resources. “Coincidentally, three months prior to this attack, the Maderas del Darién company had invited leaders of the Peasant Association of the Lower Atrato to Bogotá to discuss a proposal to exploit forests covered under the collective land title.”\footnote{Id.}

Even during relatively calm periods, government negligence toward its responsibilities can contribute to environmental protection problems.\footnote{See Government Report Finds Serious Negligence in Protection of Colombia’s Atlantic Coast, 18 INT’L ENV’T REP. 68 (1995).} Frequently, the administrative procedures for environmental control are defective; enforcement resources in government agencies are meager and impotent; administrative regulation, such as the issuance of environmental licenses, is lax; local and central government environmental funds are mismanaged; and there is a lack of inter-institutional coordination.\footnote{1995 Semiannual Survey: Chronological Summary, Environmental Events in Latin America, 6 COLO. J. INT’L ENVTL. L. & POL’Y 367, 374 (1995) [hereinafter 1995 Semiannual Survey]. (noting that “faulty administrative procedures for environmental control and the lack of enforcement resources in government agencies also have contributed to the problems”).} As if these problems did not stress the system enough, the presence of insidious and pervasive institutional and administrative corruption also casts an ominous shadow over all efforts to enforce and protect the environment and biodiversity.\footnote{In 1995, the Controller General issued a report blaming the government for the deterioration of natural resources in several areas. According to the report, a coastal highway project resulted in blocking the flow of fresh water into the nation’s largest system of inland water because of the careless manner in which the environmental licenses were issued. Also, the Sierra Nevada de Santa Marta’s erosion process is due in part to the government’s negligent management of this unique mountain range. Failure to control settlers and hunting also causes deforestation and endangers many species. Id. at 374.}

Much of Colombia’s current environmental legislation is rooted in Constitutional provisions that obligate both the state
and individuals to abide by the law. The Constitution has been called the "Green Constitution" because of the attention devoted to the environment, and the recognition of environmental protection obligations as a collective right to a safe, healthy, and sustainable environment. From these constitutional obligations, along with two important legislative acts, Law 99 of 1993 and Law 165 of 1994, a National Biodiversity Policy began to emerge.

A. Colombia's International Environmental Commitments

On June 5, 1992, Colombia signed the Convention on Biological Diversity ("CBD") in Rio de Janeiro, and ratified it in 1994. The three primary objectives of the CBD include biodiversity conservation, sustainable use of biological resources, and fair sharing of the benefits of such uses. These goals are critical to the internal armed conflict in Colombia because the illegal armed groups have completely disregarded the spirit of the Convention and prevented any governmental effort to enforce the CBD in zones of internal commotion and conflict.

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237 CONSTITUCIÓN POLÍTICA DE COLOMBIA DE 1991, supra note 221, art. 79.

238 Law 99, supra note 21.


240 See Colombia: First National Report, supra note 236.


242 Law 165, supra note 239; See also, DIVERSIDAD BIOLÓGICA Y CULTURAL, supra note 222, at 225-26 (discussing Law 165 of 1994).

The CBD asserts that conservation of biodiversity and marine and terrestrial environments are "a common concern of humankind," and States have sovereign rights over their own biological resources.244 Under Article 6, which requires parties to the Convention to develop programs and national strategies for the conservation and sustainable use of biological diversity, Colombia implemented a Política Nacional sobre Biodiversidad, or National Policy on Biodiversity245 and its respective National Strategy on Biodiversity and a Plan of Action. Within this legal structure, one of Colombia's priorities is to analyze and adjust policy instruments that will incite conservation and the sustainable use of the biological diversity.246

Under Article 11 of the CBD, Colombia adopted measures that act as incentives for the conservation of biological diversity.247 Chief among these are the Certificado de Incentivo Forestal ("CIF"), or Certificate of Forest Incentive,248 intended to preserve the natural environment from exploitation or development, and create tax exemptions for environmental investment in areas

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244 Id.
247 Article 11 states that "[e]ach Contracting Party shall, as far as possible and as appropriate, adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity." Convention on Biological Diversity, supra note 241.
248 Created by Law 139 of 1994, the certificate acknowledges those who establish new plantations of protective-productive character in forest soils that have not had natural forest in the last five years. The incentive acknowledges seventy-five percent of the cost of establishment for the native species and fifty percent for the introduced species. This incentive was expanded by Article 253 of the Tributary Code, to compensate the direct or indirect economic costs that an owner can incur due to the maintenance of natural forest within his or her property as an acknowledgment of the environmental and social benefits derived by maintaining them. See Ley 139 de 1994 [Law 139 of 1994] (1994) (Colom.), at http://www.accionambiental.org/centro_documentacion/LEY%20139%20DE%201994.doc (last visited Oct. 13, 2004). For an example of a Certificate for Tolima department, see Certificado de Incentivo Forestal [Certificate of Forest Incentive], at http://www.cortolima.gov.co/servicio/certince.htm (last visited Oct. 13, 2004).
such as adoption of clean technology, conservation of strategic ecosystems, reforestation, and control and improvement of the environment. 249

Unfortunately, the results of the conservation incentives cannot be adequately assessed. This is primarily because the criteria for evaluating and controlling the CIF are unformed, reliable scientific and ecological data for the indigenous forests of Colombia's diverse geographic regions are lacking, and there is little, if any, follow-up regulation or monitoring with respect to awards made under CIF. 250

Most disturbing of all is that a landholder of targeted lands must provide a valid property title before a CIF can be awarded. 251 The problem—and it must be emphasized that it is not an unknown factor in the reality of Colombian land ownership and possession—is that the majority of landholders in the most sensitive areas lack property title. 252 Many landholders are barely

249 For example, Colombia's Tributary Statutes contain several incentive provisions. Article 83 stipulates that, in reforestation projects there is a presumption that eighty percent of the sales value conforms with the costs and deductions inherent to their exploitation. Article 157 provides deductions for investment in new plantations, irrigation and silos. The Article specifically refers to reforestation, coconut, oil palms, rubber, olive, cacao, and fruit trees. Article 253 states that those who establish reforestation or planted trees in the reforestation areas can deduct up to twenty percent of their income. Convention on Biological Diversity, supra note 241.

250 For an extensive analysis of how CIFs have negatively impacted the Colombian forest environments and a discussion as to how small landholders are unable to qualify for CIFs, see John Wann, et al., Report on the Activities of Jefferson Smurfit Group in Colombia, Section 1.2, May 1999, available at http://latinamericasolidarity.freeservers.com/smurfit2.htm#PRODUCTION1 (last visited Nov. 8, 2004).

251 Incentivos, supra note 246.

252 The problem of poor landholders being unable to prove title leads to insurmountable economic challenges. Farmers who cannot prove ownership of land cannot receive credit to invest in the property and make it more productive. Unable to draw capital from the land, farmers who cannot prove title tend to degrade the property rather than practice stewardship. In addition, the inability to prove land title renders it difficult for displaced rural landowners to reclaim property upon return to their lands.

Although Law 387 of 1997 provides a system to freeze property transactions of displaced persons whether they hold formal title or not, the problem of enforcement remains. Of displaced landowners, 68 percent were owners, 12 percent resided on collectively owned land and only 11 percent claimed colono status with no formal title to their properties. A colono settles unclaimed lands and lives by exploiting natural resources
literate and have lived on or controlled properties for generations, even though no records exist in the files of municipal authorities.\(^{253}\) Without documentation, CIF benefits to such areas are not available.

There is also a lack of continuity throughout the national territory, and there appears to be no mechanism in place to guarantee the continuity of conservation when land changes ownership. Moreover, the incentives do not include ownership of farms less usually through agriculture and thus incorporates these lands into the national economy. By definition these lands are usually on the agricultural frontier.


This is just part of a larger problem with the rural poor being unable to obtain proper identification of self or land, especially in zones of conflict.

In Colombia, lack of documentation has become an acute problem for hundreds of thousands of people. To receive emergency help from the government, "certification" is necessary but to be certified, the displaced must present personal identity documents. Since many do not have these documents, they are put in the position of having to return to unsafe home areas to obtain them. Many as a result do not apply. Others do not apply for fear of being targeted or having to provide witnesses whom they fear could put their friends or families in jeopardy. Very few municipalities in Colombia have made efforts to resolve the problem with the result that only a minority of the displaced receives emergency assistance.

Without the basic documents they need—the cédula de ciudadanía (citizenship card), the registro civil (civil registration card), and the certificación de desplazado (certification of displacement card)—displaced persons in Colombia have no proof of land or property ownership, are unable to vote, drive, work in the formal sector, move from region to region, leave the country, or in many cases send their children to public schools. Many are also turned away from health clinics and hospitals.

than five hectares.\textsuperscript{254} This is a particularly significant shortcoming because many of Colombia's farms are less than five hectares in size.\textsuperscript{255} For example, in the area of Vélez in the Magdalena River valley, "[s]eventy percent of the farms are less than 5 hectares with the average size of these 51,198 farms being 1.28 hectares."\textsuperscript{256}

Colombia is also a participant in the United Nations Forum on Forests ("UNFF"),\textsuperscript{257} which led to the creation of the Plan Nacional de Desarrollo Forestal ("PNDF"), or National Plan for Forestry Development.\textsuperscript{258} PNDF attempts to articulate strategies and programs related to zonification, conservation, restoration of the ecosystem, and the management and exploitation of the forest ecosystem.\textsuperscript{259}

Notwithstanding efforts to initiate, develop, and support conservation and environmental enforcement mechanisms, the government asserts that illegal agriculture, encroachment into virgin forests, and the armed conflict, are factors impeding success in its conservation programs. One must wonder, however, to what extent these impediments also serve as convenient excuses for the government's inaction. The Humboldt Institute\textsuperscript{260} compiled a list

\textsuperscript{254} For twelve years, Cornare implemented incentives to promote regeneration of natural forest. \textit{See Incentivos, supra} note 246.

\textsuperscript{255} \textit{United Nations Food and Agriculture Organization Census}, at \url{http://www.fao.org/es/ess/census/wcares/Colombia_2000.pdf} (last visited Apr. 14, 2004) (indicating that of 2,021,895 farm holdings recorded, 1,067,902 or 52.8\% were less than 5 hectares in size).


\textsuperscript{259} \textit{Id.} at 4.

\textsuperscript{260} According to the Institute's webpage, the Alexander von Humboldt Biological Resources Research Institute was created by Law 99 of 1993 to provide scientific and technical support to the Environment Ministry. The Institute is a non-profit organization ruled by the norms of science and technology. It has various members including the Environment Ministry, the Colombian Institute for the Development of Science and Technology, public and private universities, local governments, and non-governmental organizations. The mission of the Institute is to promote, coordinate and realize research "which contributes to the conservation and sustainable use of biodiversity in Colombia. To achieve this objective the Institute operates with six strategic programs: Biodiversity
of 105 significant international environmental instruments to which Colombia is a party. A perusal of the list provides a stark contrast between noble intentions and the realities of the unchecked environmental degradation occurring in Colombia as a result of many factors, including a weak state, institutional corruption and incompetence, internal conflict, economic instability (particularly in the agricultural sector), and malaise.

B. Colombia’s Constitution


According to Article 79 of the Constitution, every person has a constitutional right to enjoy a healthy environment and constitución política de colombia de 1991, supra note 221, art. 79. This right had been a mere legislative right in Article 7 of the National Code of Natural Resources and later became a constitutional right. See Decree 2811, supra note 216.
Colombia's jurisprudence has treated this right just as importantly as other fundamental rights. The Constitutional Court asserted that

[t]he right to a healthy environment cannot be separated from the right to life and health of human beings. In fact, factors that are deleterious to the environment cause irreparable harm to human beings. If this is so, we can state that the right to the environment is a right fundamental to the existence of humanity.

In other words, the State of Colombia and its citizens are constitutionally obligated, as set forth in Article 8, to protect the diversity and integrity of the environment, preserve areas of special ecological importance, and protect the cultural and natural wealth of the nation. Duties such as environmental clean-up are therefore public services demanded of the State. In addition, the State is obligated to prevent and control environmental deterioration and to impose sanctions when appropriate.

In fulfilling its constitutional mandate, Colombia has established several administrative procedures for environmental protection and control. Most of these procedures are flawed, however, and the government agencies tasked with enforcement fail to carry out their responsibilities. For example, the Western Caribbean island of San Andres, with large-scale resorts and

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265 CONSTITUCIÓN POLÍTICA DE COLOMBIA DE 1991, supra note 221, art. 8. See also Decree 2811, supra note 216.

266 CONSTITUCIÓN POLÍTICA DE COLOMBIA DE 1991, supra note 221, art. 9

267 Id., art. 80.

268 One such entity arising from constitutional mandates is ECOFONDO, a corporation comprised of governmental and non-governmental organizations devoted to protecting the environment. For information on ECOFONDO, see http://www.ecofondo.org.co/english.htm (last visited Nov. 8, 2004).
facilities expanding throughout the small island, has become a very popular vacation destination for Colombia’s affluent citizens. The growth of the tourism industry has placed pressure on the fragile environment and ecosystem, from poorly planned and regulated garbage dumps, ocean pollution from sewage, and hydrocarbon dumping, to unplanned, indiscriminate deforestation and urbanization, and coral reef and sandbar destruction.\textsuperscript{269}

Colombia’s national parks system is another example of the government’s inability to enforce its obligations under Article 8 to protect the cultural and natural wealth of the nation. Article 63 states that natural parks, communal land of ethnic groups, and the archeological patrimony of the nation, are inviolable, and cannot be encumbered.\textsuperscript{270} These natural parks, inhabited by ancient ethnic groups and fragile biodiversity, are extremely rare. Yet the Colombian government did nothing to prevent 80% of the original 15,000 hectares of the Tayrona National Park from being transferred to private interests through illegal invasions or questionable land titles that were largely the result of blatant administrative corruption.\textsuperscript{271}

The “Green” Constitution mandates that a percentage of the historical homelands of indigenous and Afro-Colombian populations be placed under autonomous control. However, Colombia has failed to fulfill this requirement because such areas are under some of the strongest pressures from illegal logging, agricultural colonization, and drug cultivation.\textsuperscript{272}

Lack of governmental control and inter-institutional coordination, corruption, and the presence of armed groups are major causes of environmental devastation of the Sierra Nevada de Santa Marta (“Sierra Nevada”).\textsuperscript{273} As the highest coastal mountain range in the world, with an area of more than 17,000 square kilometers, the Sierra Nevada contains every ecosystem and climate range found in Colombia, including tropical beaches

\textsuperscript{269} \textit{1995 Semiannual Survey, supra} note 233, at 374.
\textsuperscript{270} \textit{Constitución Política de Colombia de 1991, supra} note 221, art. 63.
\textsuperscript{271} \textit{1995 Semiannual Survey, supra} note 233, at 374.
\textsuperscript{272} Tighe, \textit{supra} note 17.
\textsuperscript{273} \textit{1995 Semiannual Survey, supra} note 233, at 374.
mangrove swamps, alpine regions set among 17,000-foot peaks, and nearly impenetrable ancient jungle wilderness.\textsuperscript{274}

The Sierra Nevada is the homeland of the Kogi, an indigenous tribe descended directly from the pre-Colombian Tayrona civilization. The Kogi and other indigenous communities of the Sierra Nevada consider this mountainous region their sacred land and to many Colombians, the Sierra Nevada is one of the country’s most valued natural treasures.\textsuperscript{275} Yet, for the first time in Colombia’s history, indigenous communities, caught amid the conflict raging in the Sierra Nevada, are fleeing the area.\textsuperscript{276} These ancient mountains are rapidly debilitating due to deforestation, an irreversible erosion process caused by timber harvesting of virgin forests, agricultural colonization, narcotics cultivation, and the contamination of once pristine watercourses and soils by agri-chemicals and farming wastes. The inhabitants, whose right to a healthy environment is supposed to be protected by the Constitution, are under immense pressure from the environmental invasion of lands due to excessive, unregulated hunting and poorly orchestrated governmental anti-drug fumigation campaigns.\textsuperscript{277}

Indigenous populations and concerned citizens have few constitutional defenses with which to fight the environmental degradations occurring throughout so many regions of the nation. The civil remedies available for environmental issues include the Popular Action, which authorizes individuals to bring civil suits to force the protection of collective rights,\textsuperscript{278} and the Tutela Action,

\begin{footnotes}
\footnotetext{275}{Juan M. Maldonado, \textit{Ethical Considerations for Sustainable Development}, 20 PACE ENVTL L. REV. 663 (2003).}
\footnotetext{276}{Paraiso Sitiado, \textit{SEMANA}, Nov. 25, 2002, at 50 (on file with author). The indigenous communities suffer genocide in the hands of the illegal groups not because of their race or class, “but because of the place where they live.” Id.}
\footnotetext{277}{1995 Semiannual Survey, supra note 233, at 374.}
\end{footnotes}
which protects fundamental constitutional rights.\textsuperscript{279} Under the Constitutional Court’s interpretation, a tutela action is a means to protect the environment when a violation also affects other fundamental rights, such as life and health.\textsuperscript{280} However, because the Constitutional Court must review all tutelas, processing such actions is very slow.

\textit{C. Internal Laws}

1. The Code of Natural Resources

The Codigo Nacional de Recursos Naturales, or Code of Natural Resources ("Code"), sets forth principles guiding the use of tropical forests and other renewable natural resources.\textsuperscript{281} The Code includes a series of statutes regarding protective measures in national forestry strategy and the protection of renewable natural resources. The Code implements an environmental and forestry policy by establishing mechanisms such as economic incentives, educational activities, levies for forestry services, environmental impact assessments, and environmental emergency measures.\textsuperscript{282} Yet critics argue that there is a "generalized failure to comply with the Natural Resources Code,"\textsuperscript{283} and the government lacks the political will to give the Code teeth.\textsuperscript{284}

\textsuperscript{279} Sarmiento, \textit{Role of Public Participation}, supra note 235, at 1. An Accion de Tutela, or Action of Tutela, is derived from Article 86 of the Colombian Constitution and establishes that any person can bring an action before an ordinary judge seeking the immediate protection of his or her fundamental constitutional rights whenever they are threatened or endangered by acts or omissions of a public authority. Such a proceeding is preferential and summary. The judge, through an order to be immediately implemented, may enjoin others to act or refrain from acting. The order may be challenged and, if so, the judge then sends the order for review to the Constitutional Court for the final decision. This action may be comparable to a judicial injunction being leveled against actions or omissions of a public authority effecting individual fundamental constitutional rights in the United States. See Luz E. Nagle, \textit{Evolution of the Colombian Judiciary and the Constitutional Court}, 6 \textit{INT'L & COMP. L. REV.} 59, 84 (1995).

\textsuperscript{280} Id.

\textsuperscript{281} Decree 2811, supra note 216.

\textsuperscript{282} Id.

\textsuperscript{283} Sarmiento, \textit{Popular Actions}, supra note 278.

\textsuperscript{284} The contaminators have failed to adhere to the Code’s regulations and the
2. Law 99 of 1993

Law 99 of 1993 created the Ministry of the Environment as a national, cabinet-level governmental authority, reorganized the public sector in charge of environmental management, conservation and renewable natural resources, and established the Sistema Nacional Ambiental ("SINA"), or the National Environmental System.285 Under Law 99, the country’s process of economic and social development will follow the 1992 Declaration of Rio de Janeiro’s Principles on the Environment and Development.286 The Law establishes that the protection of biodiversity must be a priority because it is of interest to the national patrimony and to humanity.287 In addition, the Law asserts that, while Legislators formulating environmental policies will consider scientific investigation, the lack of scientific certainty and investigation will not excuse legislators from enacting effective measures to prevent environmental degradation.288

3. Enforcement

a. Law 599 of 2000 of the Colombian Penal Code

The penal code criminalizes the invasion of sensitive ecological areas. Those who invade indigenous reserves, regional parks, areas or ecosystems of strategic interest, or protected areas as defined by law or regulations will incur prison terms ranging from two to eight years and fines between 200 and 50,000 times the minimum wage salary for one month.289

government has failed to sanction them. In 1982, the companies and agents were given four years to prepare and implement a plan against contamination. As of 1994, they had yet to fulfill their duties. Id.

286 Id., tit. I, art. 1(1).
287 Id., tit. I, art. 1(2).
288 Id., tit. I, art. 1(6).
289 CODIGO PENAL [PENAL CODE], art. 337, (Colom.), available at http://www.andresospina.8m.net/custom.html (last visited Oct. 21, 2004) [hereinafter PENAL CODE, art. 337].
Law 599 of 2000 of the Colombian Penal Code\(^{290}\) establishes that damaging natural resources and the environment is a crime, and punishable by prison terms and fines. Those who destroy or damage natural resources or protected areas will incur prison terms ranging from two to six years and fines between 100 and 10,000 times the minimum wage salary for one month.\(^{291}\) Those who contaminate the air, atmosphere, soil, water or any other natural resource in a way that endangers the health and resources of the ecosystem, will incur a prison term ranging from three to six years and fines between 100 and 25,000 times the minimum wage salary for one month.\(^{292}\) While the fine will not exceed fifty times the minimum wage for one month, the penalty will be increased from one-third to one-half of that amount if the act is done with terrorist purposes.\(^{293}\) The penalties are basically unenforceable, especially since many of the perpetrators are illegally armed groups operating in areas with no rule of law to enforce regulations or monitor activities.\(^{294}\) While “Colombia’s criminal laws have proved ineffective in the enforcement of collective environmental rights,” the Constitutional Court has strived, in several cases, to protect the environment by balancing private and collective rights.\(^{295}\) The action of tutela has been utilized in the Constitutional Court by some NGOs to defend collective rights, including economic, social, cultural, and environmental rights.\(^{296}\)

\(^{291}\) PENAL CODE, art. 337, supra note 289.
\(^{292}\) Id.
\(^{293}\) Id.
\(^{294}\) Id.
\(^{295}\) See Ambassador Luis Alberto Moreno, Plan Colombia and Humans Rights, 8 HUM. RTS. BRIEF 9, 12 (2000) (noting that “[t]he reality is that Colombia’s justice system is often overwhelmed by the volume of criminal activity, and it does its best under the circumstances to punish both the guerilla and illegal defense groups that have committed crimes against citizens and the government”).
\(^{296}\) Roger W. Findley, Foreword to Symposium, Sustainable Development in Latin American Rainforests and the Role of Law, 32 TEX. INT'L L.J. 1, 8 (1997).
b. Government Monitoring of Environmental Crimes

Colombia has a number of institutions that are designated with investigative and punitive authority over environmental crimes. Under Article 250 of the Constitution, and Title XI of the Penal Code, the Fiscalía General de la Nación, or Attorney General, is required to investigate environmental crimes.297 Yet, according to the Contraloría Nacional, or Controller General’s Office, the Attorney General’s performance in the area of environmental enforcement has been lackluster.298 This is due primarily to a lack of structural organization dedicated to environmental protection, as well as the rarity of the prosecution of environmental crimes.299 For example, in 2002, only 1,667 crimes against the environment and natural resources were reported.300

The Ministry of the Environment regulates the sanitation and conservation of the environment, including the recuperation of natural resources in order to eliminate or mitigate the impact of harmful environmental activities.301 The Ministry is also charged with managing territories that comprise the National Parks system, protecting the natural patrimony and biological diversity, and implementing the conservation of special areas of importance to the ecosystem.302

Furthermore, the Procuraduría Delegada para Asuntos Ambientales y Agrarios', or Deputy Attorney General for Environmental and Agrarian Affairs, task is to fulfill the State’s obligations to protect the environment.303 One might argue, however, that the agency cannot live up to this mandate because it concentrates

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299 Id.
300 Id.
301 Law 99, supra note 21, tit. II, art. 5(2).
302 Id.
303 See CONSTITUCIÓN POLÍTICA DE COLOMBIA DE 1991, supra note 221, art. 277. See also ESTADO DE LOS RECURSOS, supra note 298.
primarily on controlling and investigating only select projects instead of the environmental degradation throughout the national territory.

The Departamento Administrativo de Seguridad ("DAS"), or Department of Administrative Security, is responsible for gathering intelligence, undertaking specialized investigations, and preventing damages to the natural resource of the nation. This authority is assigned to the special Unit of Crimes against the Existence and Security of the State. However, DAS does not assign any significant resources toward its environmental duties, and given the level of responsibility for the protection of the environment assigned to the agency, this situation is quite alarming. For example, DAS is responsible for the management, transportation and final disposition of the seized chemicals used as precursors in the manufacturing of cocaine and heroin. Yet, the manner in which the agency handles and stores these substances, most of which are quite volatile, caustic, and toxic, has not been well planned or implemented by DAS authorities and environmental experts working with the agency.

Another agency, the National Environmental Police ("NEP"), is a special unit of the National Police responsible for providing tactical and strategic support, such as control and vigilance, to the environmental authorities in the defense and protection of natural resources. Unfortunately, NEP receives little or no special training to address the myriad of environmental affairs.

V. ARMED CONFLICT DEGRADES COLOMBIA'S ENVIRONMENT:
INEFFECTIVE GOVERNMENT

A. Unique Biodiversity and Fragile Environment

Colombia is the crossroads between two continents, making it one of the most biologically diverse countries on the planet.

304 See ESTADO DE LOS RECURSOS, supra note 298.
305 Id.
306 Id.
307 See ESTADO DE LOS RECURSOS, supra note 298.
308 See Law 99, supra note 21.
Nearly all of the topographical features in the world are present in Colombia, including dense tropical jungles, extreme alpine regions, lush Andean valleys, bleak savannas, and arid deserts. Colombia is one of only twelve “mega-diversity” countries. Ranking second only to Brazil in species diversity, Colombia accounts for about 10% of the world’s biological diversity, even though the country occupies a mere 0.77% of the earth’s surface.

Colombia contains the third highest number of vertebrate species in the world (at least 2,890), and twenty-seven species of neotropical primates, over one-third of those present in the world. Colombia contains 7% of the world’s mammals (358 species), 6% of the world’s reptiles, and 10% of the world’s amphibians. Colombia is also home to about 20% of the world’s birds (1,721 species), more than any other country in the world. It is estimated that Colombia also has 1,900 species of fish, 970 species of crustaceans, 2,200 types of mollusks, 150 types of coral, and 290 types of starfish (echinoderms).

More than 55,000 plant species grow in Colombian’s soil and jungle canopies, with at least fifteen percent of the world’s orchids coloring the Colombian landscape in approximately 3,500 varieties. Many of the world’s pharmaceuticals are derived from plants found in the Colombian territory.

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309 JEFFREY A. MCNEELY ET AL., CONSERVING THE WORLD’S BIOLOGICAL DIVERSITY 93 (1990). The Choco department received more than thirteen meters annual precipitation—the highest in the world. Id.
311 MCNEELY ET AL., supra note 309, at 93.
312 Clearing-House Mechanism Colombia, Humboldt Institute, Biodiversity in Colombia, at http://www.humboldt.org.co/chmcolombia/ingles/en-biodiversidad.htm (last visited Sept. 27, 2004) [hereinafter Biodiversity in Colombia].
313 MCNEELY ET AL., supra note 309, at 93.
314 Biodiversity in Colombia, supra note 312.
315 Id.
316 Álvarez, Forests, supra note 23, at 51.
317 Introduction to Libro Rojo de Aves de Colombia, supra note 218, at 28.
318 MCNEELY ET AL., supra note 309, at 93.
319 Id.
Many animal and plant species found in Colombia, especially Colombia’s 45,000 species of angiosperms, are completely dependent on the forests in certain regions of Colombia: the three Andean cordilleras that divide Colombia into distinct climate zones; the dense jungles of Choco, located along the Pacific coast; the western Amazonian basin that extends well into Colombia’s southern territories; the unique forest regions in the areas of Putumayo and Caquetá; the mountain ranges of the Sierra Nevada de Santa Marta and Sierra de la Macarena; and the department of Meta.

These regions, largely due to their unique topographic characteristics, provide logistical opportunities for exploitation and cover for drug traffickers, drug manufacturers, and illegally armed groups, such as guerrillas and paramilitaries.

Colombia’s biological diversity has also performed a vital role in the sustenance and survival of various indigenous cultures. Colombia is home to some eighty-one ethnic tribal groups, mostly in the Amazon basin and Andean forest and mountain regions. Their cultures resisted invasion and encroachment for thousands of years; their religious beliefs, value systems, group identities, and livelihoods are largely dependent on their habitat. Yet many of the indigenous communities have degraded their own natural landscapes, partially because of the introduction and domestication of foreign plants and animals to the region. As a result, remote sensing surveys show that “as much as 97% of the tropical dry forests of the Caribbean and 70% of the Andean cloud forests have disappeared.” Colombia’s diversity is under rapidly increasing pressure due to deforestation, pollution, and many other factors that contribute to the destruction and possible extinction.

320 Álvarez, Forests, supra note 23, at 51.
322 Id.
323 Id.
324 Id.
325 Id.
of fragile habitats.\textsuperscript{326} Vast amounts of vegetable and animal species are on the verge of extinction.\textsuperscript{327} Studies also indicate that more than 1,000 plant species are threatened, including orchids, which are considered a Colombian national treasure.\textsuperscript{328}

According to data published by the International Union for the Conservation of Nature, several animals are also endangered, including “89 species of mammals, 133 bird species, 20 species of reptiles and 8 species of fish.”\textsuperscript{329} The study illustrates the effects of deforestation from the cultivation of illegal crops on several bird species.\textsuperscript{330}

Among these species is the black tinamu (\textit{Tinamus Osgoodi}), which lives in humid sub-Andean forests.\textsuperscript{331} This species has already lost eighty percent of its habitat to deforestation, particularly in the eastern Andean cordillera.\textsuperscript{332} Vast woodlands have been cut down for agricultural purposes, many times in order to grow coca and heroin poppy.\textsuperscript{333} The tinamu also is threatened by the ravages of the internal armed conflict in many of the bird’s habitats: along the Magdalena river system, in the departments of Huila and Caqueta, and running north to south through the department of Antioquiain, the extreme north of the central cordillera.\textsuperscript{334}

The crested eagle (\textit{Oroaetus Isidori}) is found throughout Colombia’s mountain ranges—the Andes, the Serrania de Perija and Sierra Nevada de Santa Marta—but has lost sixty-three percent of its habitat.\textsuperscript{335} A dramatic loss of habitat occurred

\textsuperscript{326} \textit{Biodiversity in Colombia}, supra note 312.
\textsuperscript{327} \textit{Id.} According to the Alexander von Humboldt Biological Resources Research Institute, Colombia should be “considered a country in which the environment is a high priority, in which conservation, recovery and sustainability programs must be developed that prevent the harmful effects of human activities on the biological ecosystems and their biological resources.” \textit{Id.}
\textsuperscript{328} \textit{Id.}
\textsuperscript{329} \textit{Id.}
\textsuperscript{330} \textit{Id.}
\textsuperscript{331} \textit{Id.}
\textsuperscript{332} \textit{Id.}
\textsuperscript{333} \textit{Id.}
\textsuperscript{334} \textit{Id.}
\textsuperscript{335} \textit{See César Márquez & Luis M. Renjifo, Oroaestus Isidori, in LIBRO ROJO DE AVES DE COLOMBIA, supra note 218, at 112-14.}
between 1996 and 1998, mostly due to deforestation for coca and poppy cultivation.\textsuperscript{336} The Colombian pavon (\textit{Crax Alberti}) is endemic to the Magdalena River’s middle valley in northern Colombia, San Lucas, Cauca, Sierra Nevada de Santa Marta, and part of the San Jorge and Sinu rivers.\textsuperscript{338} The pavon has lost eighty percent of its natural habitat due to the accelerated expansion of illicit crops in these areas of distribution.\textsuperscript{339} The habitat in the lower Paramillo province of the Qundío department has been disturbed by illegal timber harvesting, construction of the Urrá dam, and illegal coca cultivation.\textsuperscript{340} In the area of Sierra Nevada de Santa Marta in northern Colombia, the pavon’s habitat has been strained by the cultivation and subsequent fumigation of marijuana.\textsuperscript{341} The pavon’s habitat along the Sinu and San Jorge rivers has been deforested in large scale because of coca production.\textsuperscript{342}

The dismaying list continues: the Santa Marta parakeet (\textit{Pyrrhura Viridicata}), from the jungles of the Sierra Nevada de Santa Marta, has lost twenty-six percent of its habitat due to marijuana cultivation and the fumigation programs initiated under the so-called “Wars on Drugs.”\textsuperscript{343} During the 1970s, the greatest deforestation took place because of planting marijuana crops.\textsuperscript{344} The golden-plumed parakeet (\textit{Leptosittaca Branickii}), native to the Andean and sub-Andean forests, has lost sixty-two percent of its habitat as a result of deforestation for illegal crop cultivation.\textsuperscript{345} The military parrot (\textit{Ara Militaris}), of the Sierra Nevada de Santa Marta and the Eastern and Central Cordilleras, has also lost eighty-one percent of its habitat due to deforestation.

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\textsuperscript{336} \textit{Id.} at 113. Affected areas were the department of Narino in the South of Colombia and the forests of the Miraflores zone. \textit{Id.}
\textsuperscript{337} \textit{Id.} at 116.
\textsuperscript{339} \textit{Id.} at 141.
\textsuperscript{340} \textit{Id.} at 139.
\textsuperscript{341} \textit{Id.}
\textsuperscript{342} \textit{Id.} at 140.
\textsuperscript{343} José V. Rodríguez-Mahecha & Luis M. Renjifo, \textit{Pyrrhura Viridicata}, in LIBRO ROJO DE AVES DE COLOMBIA, \textit{supra} note 218, at 185.
\textsuperscript{344} \textit{Id.}
\textsuperscript{345} Luis M. Renjifo et al., \textit{Leptosittaca Branickii}, in LIBRO ROJO DE AVES DE COLOMBIA, \textit{supra} note 218, at 196-97.
\end{flushright}
for marijuana cultivation.\textsuperscript{346} Deforestation for the expansion of illegal crops in the department of Nariño has also resulted in the loss of twenty-five percent of the long-wattled umbrellabird’s \textit{(Cephalopterus Penduliger)} habitat.\textsuperscript{347}

Ironically, efforts to substitute illicit crops with legal crops have also caused collateral damage to some species. The brown wood-rail \textit{(Aramides Wolfi)}, living along the Pacific coast of Colombia, is threatened both by deforestation from coca production and by the substitution of African palm trees for commercial harvest.\textsuperscript{348} This substitution project has caused the destruction of seventy-six percent of the wood-rail’s habitat.\textsuperscript{349}

The cultivation of illegal crops severely affects water resources in Colombia. At one time, Colombia ranked fourth in the world, after Russia, Canada, and Brazil, in hydro resources.\textsuperscript{350} But Colombia is currently experiencing a water crisis and the World Report on the Development of the Hydro Resources ranked Colombia as 24th in water wealth and 35th in water quality in 2004.\textsuperscript{351}

According to a report by the Colombian Defense Ministry, water resources in Colombia are threatened by the lack of public awareness about water conservation and the widely-held belief that Colombia’s water resources are infinite.\textsuperscript{352} They are also threatened by a lack of understanding about the impact the internal conflict and collateral damages of narcotrafficking have on water resources. “Even though the totality of the environmental impact by narcotrafficking cannot be evaluated, it is clear that there is a severe deforestation of the tropical forest and river basin contamination.”\textsuperscript{353}

\textsuperscript{346} José Rodríguez-Mahecha, \textit{Ara Militaris}, in \textit{LIBRO ROJO DE AVES DE COLOMBIA}, supra note 218, at 205.
\textsuperscript{348} Felipe A. Estela & Isadora Angarita, \textit{Aramides Wolfi}, in \textit{LIBRO ROJO DE AVES DE COLOMBIA}, supra note 218, at 171-72.
\textsuperscript{349} Id.
\textsuperscript{351} Id.
\textsuperscript{352} Id.
\textsuperscript{353} Id.
According to the National Antinarcotics Police, seventy-three percent of the 102,071 hectares of illicit crops in the country are located close to vital water resources, such as the Putumayo and Caquetá rivers. Moreover, the increased cultivation of the African palm is decreasing water supplies, particularly in zones covered by natural forestry. Rather, it constitutes an ill-conceived policy of substituting an agribusiness commodity for the restoration of the original ecosystem and its diversity.

Colombia's National Parks System also experiences the effects of deforestation resulting from illegal crop cultivation and the illegal harvesting of hardwoods. Tayrona National Park, located in the Sierra Nevada of Santa Marta in northern Colombia, has the "greatest biological diversity of the American littoral," with an environment ranging from marine areas to alpine regions. There is a great diversity of species within the Park, including 108 species of mammals, 765 types of terrestrial flora, 471 crustaceans, 300 species of birds, 700 mollusks, and 401 varieties of fish.

B. Environmental Effects of Armed Conflict

The armed conflict persists in several municipalities that possess great biodiversity and forest resources. The most direct

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354 See Incentivos Económicos Perversos Para la Conservación de la Biodiversidad, Boletín No. 21 BIOSINTESIS (2001), at http://www.humboldt.org.co/download/bol21.pdf (last visited Oct. 8, 2004). African Palm trees have been highly encouraged as an alternative to illicit crops and have been lauded as an important weapon in the fight against rural poverty. This crop is financed with resources from Plan Colombia, FINARGO and the Agrarian Bank. Unfortunately, African Palm producers have failed to consider the negative effects of large African Palm crops on a forest's biodiversity. These crops have been planted in zones covered by natural forestry. However, when the African Palm is cultivated in the middle of the humid forestry, it destroys the ecosystem. This contributes to the disappearance of fauna and flora. Planting palm is not planting forestry; an African Palm crop creates a homogeneous ecosystem and is a poor substitute for a diverse natural forest. This also negatively impacts the environment because it decreases water production, modifies soil composition, and alters the harmony between fauna and flora. Id.

355 Id.

356 Id.


358 Id.
environmental damages caused by Colombia’s illegally armed groups and criminal organizations are: the increased clearing of land in order to grow illicit crops, in which illegally armed groups have used narcotrafficking as the most important vehicle for territorial control, the impact of displacing campesinos, responsible for clearing virgin land to grow sustenance crops; the contamination of soil and water resources resulting from the activities of drug labs and armed encampments; and deliberate terrorist attacks against environmental resources as well as oil and gas facilities.

Many of the affected lands are located in the temperate or tropical zones most amenable to the cultivation and processing of illegal coca, heroin poppies, and marijuana. These lands include the Sierra Nevada of Santa Marta, the Andean Chocó region, the middle Magdalena River Valley, and the Colombian Amazonian forests ranges. Armed groups occupy 6.63 million hectares (70%) of the Andean region, 7.48 million hectares (21%) of the Amazon

359 See MINISTERIO DE INTERIOR, PLAN NACIONAL DE LUCHA CONTRA LAS DROGAS: COLOMBIA 1998-2002 14 (2002), available at http://www.dnecolombia.gov.co/doc/Publicaciones/estrategica/plan_drogas.pdf (last visited Oct. 8, 2004) [hereinafter PLAN NACIONAL]. During the 1980s, illegal money was used to buy land in the middle Magdalena River Valley. In this area, a strong presence of illegal groups exists and paramilitary groups have been promoted strongly. See id.

360 See James Wilson, Brutal Battle For Territory As Colombia Prepares Offensive Against Rebels, Financial Times (London), Sept. 13, 2000, at 5 (reporting that the Putumayo region of Colombia has been hotly contested by illegal armed groups vying for control of a region where coca and opium cultivation, with FARC exerting hegemony over the region, and that similar violent land grabs by illegal armed groups is ongoing throughout Colombia).

361 See Yadera Ferrer, Drugs–Colombia: Coca Production Grew Alongside Peace Talks, Inter Press Service, Apr. 1, 2002 (noting how coca farmers moved into San Vicente del Caguan, occupied by FARC, to escape the fighting between illegal armed groups for control of coca growing areas).

362 See Martin Arostegui, Colombia Rebels Enter Drug Trade, United Press International, July 7, 2001 (reporting on how aerial photos of the Amazon basin showed contaminates from drug labs spreading throughout the river system).

363 See Lauren E. Godshall, Making Space For Indigenous Intellectual Property Rights Under Current International Environmental Law, 15 GEO. INT’L ENVTL. L. REV. 497, 503 (2003) (describing the environmental havoc caused by guerrillas bombing oil pipelines running through the indigenous U’wa people’s lands, and noting that over the course of the eleven years, rebels have been bombing the Cano-Limon pipeline, between 1.7 and 2.3 million barrels of oil have seeped into the soil).

364 Álvarez, Forests, supra note 23, at 57.

365 Id.
forests, and 1.9 million hectares (21%) of the Chocó.\textsuperscript{366} The Andean region—including the Serranía de San Lucas, Nudo de Paramillo, Páramo de Las Hermosas, and the largest regions of Eastern Andean Cordillera—comprises “the largest continuous forest remnants” and appears most negatively impacted by the presence of armed groups.\textsuperscript{367}

1. Deforestation from Coca and Poppy Cultivation

There are direct and indirect causes for the loss of biodiversity in Colombia.\textsuperscript{368} Deforestation, despite a lack of precise statistics regarding its extent, is one of the principal direct causes.\textsuperscript{369} It is estimated that “one third of Colombia’s primary forest has been lost” due to deforestation.\textsuperscript{370}

Pollution is another cause of biodiversity loss. “Colombia has lost 73\% of its continuous montane forests,” due to the ravages of legal and illegal deforestation.\textsuperscript{371} In the last fifteen years, there are indications that more than 1,000,000 acres of land have been deforested by narcoguerrillas and narcotraffickers in order to cultivate and harvest illicit crops.\textsuperscript{372}

If the current rate of deforestation continues, government officials estimate that the jungles will all be farmland in approximately seventeen years.\textsuperscript{373} The figures covering the last decade alone are daunting; 1,361,475 hectares of tropical forests were cleared between 1990 and 2000, an area 1.52 times greater than Yellowstone National Park.\textsuperscript{374} Unfortunately, the “relentless planting schedule destroys all vegetation, leads to massive soil erosion,

\textsuperscript{366} Id. at 55.
\textsuperscript{367} Id. at 57.
\textsuperscript{368} See Colombia: First National Report, supra note 236, at 13.
\textsuperscript{369} Id.
\textsuperscript{370} Id. Land has been cleared for the following reasons: 73.3\% from the expansion of agriculture and colonization; 11.7\% for timber; 11\% for firewood; 2\% by forest fires; and 2\% for illegal crops. Id.
\textsuperscript{371} Álvarez, Forests, supra note 23, at 50.
\textsuperscript{372} See Verdad Colombia, Colombia and the Environment: Colombia Has Much to Celebrate . . . and Also Much to Fear, at http://verdadcolombia.org/documentos/documentos/01.asp (last visited Oct. 8, 2004).
\textsuperscript{373} Id.
\textsuperscript{374} Id.
which can cause flooding, which in turn ruins more land." As if the damage is not enough of a problem, the proliferation of illicit crops severely reduces the production of food crops such as plantain and yucca root.

Little research has been done on the environmental impact of poppy and coca cultivation, and according to the Colombian government, the environmental effects from producing illicit crops and using precursors have yet to be sufficiently evaluated. Part of the gap in empirical knowledge has to do with the risk of life in conducting research and gathering statistical information on the deforestation resulting from the cultivation of illegal crops. As a result, the existing information is essentially based on deductions from analyzing the hectares of "illicit crops in some forested areas."

What is known, however, is the selection process of where to cultivate illegal crops devastates the environment and biodiversity. The most favorable climate zones for growing coca and opium poppy are sensitive ecosystems of great environmental value. The Andean forests and the upper Andean elevations are most suitable for poppy, while the plains and jungles of the Orinoco and Amazonas areas are best for the cultivation of coca.

While it has become increasingly dangerous to determine accurate statistics of coca crop cultivation in more recent years, it is believed that between 1985 and 1989, coca cultivation grew by 27,000 hectares, an increase of 175 percent. It is also believed that between 1992 and 2000, the number of hectares used for coca cultivation almost quadrupled, from 38,000 to 136,000 hectares.

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375 Id.
376 Id.
377 See PLAN NACIONAL, supra note 359, at 15.
379 Id.
380 See Memorias Foro: Cultivos Ilicitos en Colombia, Aug. 17-18, 2000, Bogotá (on file with author).
381 See id. These three areas of growth characteristically have the greatest supply of germplasma on the planet. Id.
383 Id.
In 2001, 1,142,000 square kilometers of the national territory were surveyed. By November 2001, it was determined that 144,807 hectares of coca cultivation were observed in twenty-two of Colombia’s thirty-two departments. By the end of 2001, it was estimated that 7,235,000 hectares, five percent of the national territory, was affected by coca cultivation.

Due to climatic requirements, coca cultivation for narco-trafficking remains concentrated in the Amazon basin. Within this area, about 65,000 hectares dispersed in the neighboring departments of Putumayo and Caquetá accounts for forty-five percent of coca cultivation. In addition, thirty-four percent of coca production (about 49,000 hectares) in Colombia occurs in the neighboring departments of Meta, Guaviare, and Vaupés.

More startling about these statistics is that the political map of Colombia reveals these departments to be the largest in the nation; thus, counter-narcotics efforts in these regions are daunting even under the best circumstances. This is not to say that interdiction and eradication efforts have not yielded any results. For example, in 2001, illicit crop cultivation dropped in Putumayo by 18,902 hectares and in Caquetá by 12,087 hectares. As one can imagine, however, the reduction in one department led to increased production in neighboring departments. In the same year, coca cultivation increased in Guaviare by 7,934 hectares, in Vichada by 4,231 hectares, and in Norte de Santander by 2,865 hectares.

By December 2002, approximately 102,000 hectares of coca were cultivated in twenty-one out of the thirty-two Colombian...
departments. According to the United Nations Office on Drugs and Crime, that amount indicates a small reduction, approximately 43,000 hectares, from a year earlier when coca cultivation was estimated at about 145,000 hectares.

The following table is based on data compiled by the United Nations Office of Drug Control and represents the rise and fall of coca cultivation from 1994 through 2002:

<table>
<thead>
<tr>
<th>Year</th>
<th>Coca Hectares</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>44700</td>
</tr>
<tr>
<td>1995</td>
<td>50900</td>
</tr>
<tr>
<td>1996</td>
<td>67200</td>
</tr>
<tr>
<td>1997</td>
<td>79400</td>
</tr>
<tr>
<td>1998</td>
<td>101800</td>
</tr>
<tr>
<td>1999</td>
<td>160000</td>
</tr>
<tr>
<td>2000</td>
<td>163000</td>
</tr>
<tr>
<td>2001</td>
<td>145000</td>
</tr>
<tr>
<td>2002</td>
<td>102000²³⁵</td>
</tr>
</tbody>
</table>

However, these figures and statistics must be viewed with a degree of skepticism. The United States Office of Drug Control Policy released figures that differ significantly: 169,800 hectares in 2001, 144,450 hectares in 2002, and 113,850 hectares for 2003. The disparity in these figures demonstrates that authorities do not really know how much coca grows in Colombia.

Despite interdiction and eradication campaigns throughout the 1990s, the amount of coca under cultivation is still quite alarming. The next table displays the Colombian departments where coca cultivation is prevalent, resulting in the expansion of coca productions in regions where the environment and biodiversity are highly stressed.

<table>
<thead>
<tr>
<th>By hectares</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guaviare Region (including Macarena, Meta, Vichada, Rio Duda)</td>
<td>26700</td>
<td>29800</td>
<td>38200</td>
<td>56700</td>
<td>78500</td>
</tr>
<tr>
<td>Caqueta Region (including east/west Caqueta)</td>
<td>39400</td>
<td>33600</td>
<td>32200</td>
<td>40300</td>
<td>32350</td>
</tr>
<tr>
<td>Putumayo Region (including Putumayo East)</td>
<td>30100</td>
<td>45900</td>
<td>47400</td>
<td>42000</td>
<td>8200</td>
</tr>
<tr>
<td>Other (Nariño, Norte de Santander, Arauca, San Lucas, Antioquia, Santander)</td>
<td>5600</td>
<td>13200</td>
<td>18400</td>
<td>30800</td>
<td>25400</td>
</tr>
</tbody>
</table>

**Footnotes:**


These statistics speak volumes about the pervasiveness of illegal crop cultivation in Colombia. Another pressing concern, however, should be the damage Colombia’s illegal crop cultivation methods inflict on the environment. The first step in cultivation is the selection of optimum areas for planting that are slightly sloped so that standing water will not drown young plants.\textsuperscript{396} The most favorable climate zones for growing coca and opium poppy are sensitive ecosystems of great environmental value.\textsuperscript{399} Opium poppies are not indigenous to Colombia; the crop was introduced by drug traffickers in the mid-to-late 1980s: “[r]eports of substantial opium poppy cultivation in Colombia began in 1990. By 1992, couriers from Colombia were being arrested on a regular basis at Miami International Airport and JFK with one to two kilograms of heroin.”\textsuperscript{400}

Poppy grows prodigiously in Andean forest regions known as “bosques de niebla.”\textsuperscript{401} This type of forest area contains a great amount of water,\textsuperscript{402} and is well-suited for small-scale poppy growing within an already well established agricultural border.\textsuperscript{403} In both the tropical jungle and the Andean region, large-scale cultivation occurs in peripheral agricultural zones or isolated zones within wooded areas.\textsuperscript{404} Unfortunately, large natural reserves and natural parks are premium zones for the potential expansion of illegal crop cultivation.\textsuperscript{405}


\textsuperscript{399} See Andes Under Siege, supra note 382 (noting that “extraordinary rich biodiversity of Colombia is under serious threat by narcotics traffickers who are cultivating coca and opium poppy crops in ecologically sensitive regions of the country, according to the Colombian government”).


\textsuperscript{401} These forestries have been threatened by great agricultural expansion. See PLAN NACIONAL, supra note 359, at 16.

\textsuperscript{402} Id.

\textsuperscript{403} Id.

\textsuperscript{404} Id.

\textsuperscript{405} Id.
Once an area of land is selected for cultivation, the second stage is preparing the area for planting. The most common method of planting is the “tala”—burning of thousands of hectares of forest terrain. In order to produce one hectare of coca crop, it is estimated that four hectares of forest or jungle are destroyed. For every hectare of opium poppy harvested, the estimated loss of Andean jungle is 2.5 hectares. The following table illustrates the deforestation rates in Colombia from 1993 through 2000.

<table>
<thead>
<tr>
<th>Year</th>
<th>Deforestation for Coca (Hectares)</th>
<th>Deforestation for Poppy (Hectares)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>179110</td>
<td>57500</td>
</tr>
<tr>
<td>1994</td>
<td>214947</td>
<td>76906</td>
</tr>
<tr>
<td>1995</td>
<td>265473</td>
<td>98217</td>
</tr>
<tr>
<td>1996</td>
<td>325649</td>
<td>122294</td>
</tr>
<tr>
<td>1997</td>
<td>430732</td>
<td>150039</td>
</tr>
<tr>
<td>1998</td>
<td>537777</td>
<td>181601</td>
</tr>
<tr>
<td>1999</td>
<td>661568</td>
<td>218328</td>
</tr>
<tr>
<td>2000</td>
<td>800478</td>
<td>260422</td>
</tr>
</tbody>
</table>

A number of serious effects are caused by the clearing of land for cultivation. These include: destruction of ecological niches; destruction of unknown genetic potential; soil erosion; destruction

406 Id.
407 See PLAN NACIONAL, supra note 359, at 16.
408 Id.
410 See also Verdad Colombia, La Naturaleza: Otra Victima de la Guerrilla en Colombia, at www.verdadcolombia.org/articulos/articulos/01.asp (last visited Oct. 8, 2003). There are between 96 and 120 varieties of trees at risk of disappearing, without counting those which have not even been studied or discovered. Some tree species are of unknown bioenergetic potential or of high potential pharmaceutical, nutritional or economic value. Id.
of native vegetation; alterations in the patterns of rains and local climate; significant carbon dioxide emissions due to the burning of the forests and jungles; destruction of the landscape; extinction of endemic species within the areas under cultivation; deterioration of water sources;\textsuperscript{411} and fragmentation of the fauna.\textsuperscript{412}

The human impact of coca and opium cultivation is equally stressful on the environment. Cultivation causes a swift, abnormal settling of thousands of persons who participate in the preparation and processing of the drug.\textsuperscript{413} The influx causes contamination of water and soils, resulting in unsanitary solid and liquid wastes that cannot be treated.\textsuperscript{414} The following table shows the production of solid waste in the areas of Colombia where the majority of illicit cultivation occurred during 1999:

<table>
<thead>
<tr>
<th>Department</th>
<th>Number of municipalities</th>
<th>Urban population</th>
<th>Tons of waste per month</th>
<th>Tons of waste per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caquetá</td>
<td>16</td>
<td>195483</td>
<td>4228</td>
<td>50734</td>
</tr>
<tr>
<td>Putumayo</td>
<td>13</td>
<td>107112</td>
<td>1616</td>
<td>19392</td>
</tr>
<tr>
<td>Amazonas</td>
<td>2</td>
<td>26912</td>
<td>486.25</td>
<td>5835</td>
</tr>
<tr>
<td>Totals</td>
<td>21</td>
<td>329507</td>
<td>6330.25</td>
<td>75961</td>
</tr>
</tbody>
</table>

Once narcotraffickers establish the growing areas, the third stage of cultivation occurs: the establishment of farm operations to sustain the crops.\textsuperscript{416} At this stage, the agricultural processes

\textsuperscript{411} Id. In 1970, Colombia had approximately 18,000 rivers. The country has lost about 200 rivers per year in the last thirty years, decreasing the number to 2,000; a loss of 12,000 rivers. Id.

\textsuperscript{412} See Memorias del Foro, Cultivos Ilicitos en Colombia, supra note 380, at 110.

\textsuperscript{413} Id.

\textsuperscript{414} Id.

\textsuperscript{415} Id.

\textsuperscript{416} Id.
inherent to crop growing occur, including sowing and planting, tending the fields, and harvesting the crops.\textsuperscript{417} In some territories, coca and opium farmers compensate for the scarcity of labor with the heavy use of pesticides, fungicides, and fertilizers.\textsuperscript{418} Overuse is common.\textsuperscript{419}

The primary environmental impacts of illegal crop farms include: contamination of surface and subterranean bodies of water; alteration of additional landscape; soil contamination by chemical agriculture products; and air contamination caused by the vaporization or even incineration of agri-chemicals due to the lack of control in the handling of such chemicals.\textsuperscript{420} The majority of the farmers do not apply the recommended dosages of agri-chemicals, believing incorrectly that an increase in the quantity and concentration of agri-chemicals will result in higher and faster yields.\textsuperscript{421}

In addition to the impacts of illicit crop farming, the narcotraffickers and illegal armed groups have constructed many roads through the forests and jungles to service the illegal crop cultivation sites.\textsuperscript{422} These roads add additional stress to the environment and destroy biodiversity.\textsuperscript{423} The Colombian Air Force has detected close to twenty-five clandestine trails in the heart of the jungle, where narcotraffickers have leveled kilometers of jungle to open trails for the entry of arms and the exit of processed drugs.\textsuperscript{424}

The final stage of drug production involves the harvesting and processing of coca and poppies into a finished product.\textsuperscript{425} During each of the steps, drug producers use a significant quantity of chemicals which are then dumped into the surrounding region as waste. The manufacturing process occurs in a three-phase process:

\textsuperscript{417} Id.
\textsuperscript{418} See Memorias del Foro, Cultivos Ilícitos en Colombia, supra note 380, at 110.
\textsuperscript{419} Id.
\textsuperscript{420} Id.
\textsuperscript{421} Id.
\textsuperscript{423} Id.
\textsuperscript{424} Id.
\textsuperscript{425} Id.
Phase 1: Raw Coca Leaf to Coca Paste
1. Leaves are placed in container or plastic-lined pit.
2. Alkaline solution (sodium bicarbonate) is added to the leaves.
3. Water and kerosene are added.
4. The mixture is agitated (cocaine alkaloids and kerosene separated from water and coca leaves).
5. Water and leaves are removed. Sodium carbonate is again added to the acid-kerosene solution, causing a precipitate.
6. The precipitate is filtered and dried, producing coca paste.

Phase 2: Coca Paste to Cocaine Base
1. Coca paste is dissolved by sulfuric acid or hydrochloric acid in water.
2. Potassium permanganate is combined with water and added to the paste and acid solution.
3. The resulting solution is filtered and the precipitate is discarded.
4. Ammonia is added to the filtered solution to cause the raw cocaine base to precipitate. The liquid chemical wastes are drained into a nearby stream or river.

Phase 3: Cocaine Base to Cocaine Hydrochloride
1. Acetone or ether is used to remove unnecessary components.
2. Hydrochloride acid is then added, and the cocaine crystallizes.
3. Using a hot oven or microwave, the crystallized cocaine is dried.\(^\text{426}\)

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This process produces not only a drug concoction ready for packaging and shipment, but also toxic areas of unusable land. As more sites are created for processing coca, the government is further pressured to respond to increasing environmental problems caused by the illegal drug production in sensitive areas. Again, one must keep in mind that these drug-processing sites are in areas under the control of illegally armed groups. Even if the government has the capacity to clean up contaminated sites, the sites remain inaccessible.

2. Precursors' Contamination of the Environment

Despite the attempt of domestic laws and international instruments to deny traffickers the precursor chemicals needed to manufacture illicit drugs, such commerce continues to proliferate. The regulation of precursors is internationally accepted under the 1988 United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. Article III mandates:

\[
\text{[e]ach Party shall adopt such measures as may be necessary to establish as criminal offences under its domestic law, when committed intentionally. . . . The manufacture, transport or distribution of equipment, materials or of substances listed in Table I and Table II, knowing that they are to be used in or for the illicit cultivation, production or manufacture of narcotic drugs or psychotropic substances.}\]

Article XII establishes the obligation on parties to the Convention to control chemical commerce in order to prevent diversion to

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427 See id.
428 See id.
430 Id., art. 3, §1(a)(iv).
illicit drug manufacture: "[t]he Parties shall take the measures they deem appropriate to prevent diversion of substances in Table I and Table II used for the purpose of illicit manufacture of narcotic drugs or psychotropic substances, and shall co-operate with one another to this end."\textsuperscript{431}

The Convention identifies the following chemicals as those used in the manufacture of illicit drugs:

<table>
<thead>
<tr>
<th>Table I</th>
<th>Table II</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{N}-acetylanthranilic acid</td>
<td>Acetic anhydride</td>
</tr>
<tr>
<td>Ephedrine</td>
<td>Acetone</td>
</tr>
<tr>
<td>Ergometrine</td>
<td>Anthranilic acid</td>
</tr>
<tr>
<td>Ergotamine</td>
<td>Ethyl ether</td>
</tr>
<tr>
<td>Isosafrole</td>
<td>Hydrochloric acid</td>
</tr>
<tr>
<td>\textit{Lysergic} acid</td>
<td>Methyl ethyl ketone</td>
</tr>
<tr>
<td>3,4-methylenedioxyphenyl-2-propanone</td>
<td>Phenylacetic acid</td>
</tr>
<tr>
<td>1-phenyl-2-propanone</td>
<td>Piperidine</td>
</tr>
<tr>
<td>Piperonal</td>
<td>Potassium permanganate</td>
</tr>
<tr>
<td>Pseudoephedrine</td>
<td>Sulphuric acid</td>
</tr>
<tr>
<td>Safrole</td>
<td>Toluene\textsuperscript{432}</td>
</tr>
</tbody>
</table>

Section Nine of Article XII instructs Party States to: organize and sustain a method to oversee the international trade of the materials in Table I and Table II, support and allow for the

\textsuperscript{431} \textit{Id.}, art. 12, §1.
seizure of these substances if evidence indicates that the use is intended for illicit narcotics manufacturing, require proper labeling of substances in the import and export process, and to guarantee that documents on the movement of these substances will be preserved and stored for two years in order to be available for review by proper authorities.\textsuperscript{433}

Colombia was an original participant in the Convention, signing on December 20, 1988.\textsuperscript{434} Upon signature, Colombia designated a reservation pertaining to its cooperation in the investigation of domestic drug offenses under Article Nine.\textsuperscript{435} Colombia justified the reservation stating,

\begin{quote}
[Its legislation does not permit outside co-operation with the judiciary in investigating offences nor the establishment of joint teams with other countries to that end. Likewise inasmuch as samples of the substances that have given rise to investigations belong to the proceedings, only the judge, as previously, can take decisions in that regard.\textsuperscript{436}
\end{quote}

Up to this point in time, Colombia did not have any significant mutual legal assistance agreements with other states.\textsuperscript{437}

Colombia’s ratification of the Convention on June 10, 1994, altered the justification to the 1988 reservation, stating that Colombia has reservations “inasmuch as they [paragraphs 1 (b), (c), (d) and (e) of Article Nine] conflict with the autonomy and independence of the judicial authorities in their jurisdiction over

\begin{tiny}
\textsuperscript{433} See \textit{U.N. Convention}, supra note 429, art. XII, §9.
\textsuperscript{435} \textit{Id.} at 429.
\textsuperscript{436} \textit{Id.}
\textsuperscript{437} See \textit{Mutual Legal Assistance in Criminal Matters and Extradition, Multilateral and Bilateral Judicial Cooperation Instruments}, at http://www.oas.org/juridico/MLA/en/co/e_col-mla-gen-list.html (last visited Oct. 8, 2004) [hereinafter \textit{Mutual Legal Assistance}]. Among the bilateral conventions in place at the time were the Agreement in Letters Rogatory with Chile, effective July 27, 1988, and the Agreement on Judicial Cooperation and Mutual Assistance in Criminal Matters with Ecuador, effective December 18, 1986. \textit{Id.}
\end{tiny}
the investigation and judgment of offenses." At that time, Colombia was still reeling from narcoterrorism, following a costly and bloody war against the notorious Medellín Cartel. While the State was objecting to submitting to foreign cooperation in judicial investigations of drug manufacturing, it was midway through an unprecedented six-year thirty-six million dollar Administration of Justice aid package from the United States Agency for International Development. Moreover, Colombia, by 1994, was party to numerous bilateral Judicial Cooperation Agreements, including an agreement, signed on February 25, 1991, with the United States on Measures to Prevent the Diversion of Essential Chemicals.

At ratification in 1994, Colombia issued Declaration Two to the Convention that states:

> It is the view of Colombia that treatment under the Convention of the cultivation of the coca leaf as a criminal offence must be harmonized with a policy of alternative development, taking into account the rights of the indigenous communities involved and the protection of the environment. In this connection it is the view of Colombia that the discriminatory, inequitable and restrictive treatment accorded its agricultural export products on international markets does nothing to contribute to the control of illicit crops, but, rather, is a cause of social and environmental degradation in the areas affected. Further, Colombia reserves the right to make an independent evaluation of the ecological impact of drug control policies, since those that have a negative impact on ecosystems contravene the Constitution.

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438 Multilateral Treaties, supra note 434, at 429.
440 See Mutual Legal Assistance, supra note 437.
441 See Nagle, U.S. Mutual Assistance, supra note 6, at 1249 n.67.
442 Multilateral Treaties, supra note 434, at 429.
This passage is nothing more than a political statement made on the world stage and does not belong in the Convention. Colombia's objection to the criminalization of coca cultivation has nothing to do with harmonizing alternative development, considering the rights of indigenous communities, or protection of the environment. While coca has always grown in small amounts in some indigenous communities in Colombia, coca cultivation in large amounts was not detected until 1986.444

Yet, Colombia cannot justify that coca growing is a right of Colombia's indigenous peoples.445 This justification creates a slippery slope; considering the way Colombia treats its own indigenous communities, one must question if the Indian traditions are used as a shield to hide ulterior motives.

Finally, Colombia's declaration that it reserves the right to evaluate the ecological impact of drug control policies prompts the question as to the extent, given the evidence in the field, Colombia

443 See U.N. Convention, supra note 429, art. 3, §1(a)(ii).
444 See THOUIMI, supra note 35, at 123. Campesinos received seeds from the drug traffickers, many of which belonged to indigenous communities. The evidence shows that the traffickers were the distributors of the seeds, who were then the guaranteed purchasers of the crops. The crops quickly spread throughout the Colombian Andes. Id. at 120.
445 See Ana Maria Diaz & Fabio Sanchez, Geografía de los Cultivos Ilícitos y Conflicto Armado en Colombia 8, (unpublished article on file with author). See also Multilateral Treaties Deposited with the Secretary-General, available at http://untreaty.un.org/ENGLISH/bible/englishinternetbible/partI/chapterVI/treaty25.asp (last visited Nov. 8, 2004). Peru's reservation to the Convention provides an interesting contrast, particularly in the light that coca growing is very much an historical tradition among its indigenous cultures:

Peru formulates an express reservation to paragraph 1(a) (ii) of article 3, concerning offences and sanctions; that paragraph includes cultivation among the activities established as criminal offences, without drawing the necessary clear distinction between licit and illicit cultivation. Accordingly, Peru also formulates an express reservation to the scope of the definition of illicit traffic contained in article 1 in so far as it refers to article 3, paragraph 1 (a) (ii).

See also Coca: Erythroxylum Coca, at www.herbs2000.com/herbs/herbs_coca.htm (last visited Nov. 8, 2004). Coca cultivation in Perú is central to social customs that have existed for the past millennium. The Incans considered it a sacred leaf, and its consumption was “reserved for priests and royalty, for the wealthy and talented, and for others of rank and privilege.” Id.
has ever considered the environmental impact of its national drug control policies.\textsuperscript{446}

Granted, Colombia has a long and proud history of standing up to real or imagined pressure from assumed imperialist intentions, both by the United States and former colonial powers.\textsuperscript{447} While Colombia's defiance from foreign intervention may appear noble in the eyes of other developing nations, it seems highly counterproductive to the goals set forth by international agreements to decrease the production and distribution of illegal drugs worldwide.

Despite Colombia's efforts to adhere to or distance itself from the 1988 Convention, the extent and nature of Colombia's border regions—characterized generally by thick tropical forests accessible only through dense river corridors,\textsuperscript{448} remote and rugged coastline with little government oversight, and desolate arid regions with little government infrastructure—make it extremely difficult for Colombian authorities to exercise an effective control over the illegal transportation of precursor chemicals into Colombia by drug manufacturers.\textsuperscript{449} Precursors not smuggled into the national territory are either legally imported for licit usages and then diverted for the processing of illegal drugs or hijacked by illegal actors from domestic industrial factories.\textsuperscript{450}

Precursor chemicals are necessary because "[w]ith the exception of cannabis, every illicit drug requires chemicals to be refined to its final, consumable form (e.g. the coca plant to cocaine, the poppy plant to heroin), or is purely the result of chemical synthesis (e.g. methamphetamine, ecstasy, etc)."\textsuperscript{451}

\textsuperscript{446}On December 30, 1997, Colombia withdrew its reservations with regard to Article 3 (6) and (9), and Article 6. See Multilateral Treaties, supra note 434, at n.8.

\textsuperscript{447}See generally The History of the Guerrilla Movement in Colombia, at http://www.geocities.com/CapitolHill/7078/g.txt (last visited Nov. 8, 2004).

\textsuperscript{448}See PLAN NACIONAL, supra note 359, at 50. Colombia shares a 9,242 kilometer-long border with Brazil that is characterized as a jungle zone. See CIA, WORLD FACTBOOK, supra note 13.

\textsuperscript{449}PLAN NACIONAL, supra note 359, at 50.

\textsuperscript{450}Id. at 51.

As indicated by the following table, precursor chemicals for the manufacture of cocaine and heroin are transported to Colombia from all over the world:

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Precursor Chemicals for Cocaine and Heroin Manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>Sodium carbonate</td>
</tr>
<tr>
<td>China</td>
<td>Sodium carbonate, Potassium permanganate</td>
</tr>
<tr>
<td>Mexico</td>
<td>Acetic anhydride, Ethyl acetate</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Methyl-ethyl acetone, Ethyl acetate</td>
</tr>
<tr>
<td>Romania</td>
<td>Sodium carbonate</td>
</tr>
<tr>
<td>Trinidad &amp; Tobago</td>
<td>Ammonia, Urea</td>
</tr>
<tr>
<td>United States</td>
<td>Ammonia, Acetic anhydride, Butanol, Isopropyl alcohol, Sodium carbonate</td>
</tr>
<tr>
<td>Venezuela</td>
<td>Ammonia, Ethyl acetate, Hexane, Isopropyl alcohol, Methanol, Sodium carbonate</td>
</tr>
</tbody>
</table>

Unlike the transnational smuggling corridors through which the world’s supply of illegal drugs flow, the avenues by which the precursor chemicals travel in their source countries are relatively benign and difficult to police. The effort to trace and track shipments of precursors requires significant international

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453 See ONDCP Fact Sheet, supra note 451.
cooperation. Additionally, hardship and costs are inflicted on legitimate business and corporations dependent on industrial chemicals for industrial, manufacturing, public health, civil engineering, and commercial pharmaceutical applications.

The United Nations International Narcotics Control Board ("INCB"), based in Vienna, Austria, is one of the primary international organizations responsible for coordinating the efforts of major manufacturing and trading countries to decrease the flow of precursors into the illegal drug manufacturing pipeline. INCB efforts in the late 1990s, to facilitate interdiction and monitoring of the movement of precursor chemicals, resulted in two programs—Operation Purple, designed to track illicit shipments of potassium permanganate, and Operation Topaz, intended to track shipments of acetic anhydride.

Most shipments to Colombia begin as seemingly legitimate industrial transactions by chemical wholesalers and brokers who are registered and licensed to import and distribute the chemi-

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454 See id.
455 See id.
456 See id.
457 Id. According to claims by the DEA, Operation Purple, intended to expose shipments of precursors bound for illegal drug labs, has been successful. "The cornerstone of the operation is an intensive PP tracking program aimed at identifying and intercepting diverted potassium permanganate; identifying rogue firms and suspect individuals; gathering intelligence on diversion methods, trafficking trends, and shipping routes; and taking administrative, civil, and/or criminal action as appropriate." Between April 1999, the time of the Operation's inception, and January 2002, Operation Purple has squeezed the availability of precursor chemicals to traffickers. During that time, some 840 shipments (about 228 millions kilograms) of potassium permanganate, a vital chemical for cocaine production, were tracked. This led to the arrest of forty-five criminals and fifty-one shipments were either seized or prevented. The Office of National Drug Control Policy claims that the amount of chemicals seized during that time could have been used to manufacture twenty-nine million kilograms of cocaine. Id.
458 See ONDCP Fact Sheet, supra note 451. Operation Topaz targets the movement of acetic anhydride, a primary chemical used in the manufacture of heroin. According to the Office of National Drug Control Policy, thirty-one countries are now participating in Operation Topaz. Figures for 2001 indicated that more than 61.8 million kilograms of the chemical had been tracked, resulting in the interdiction or seizure of about 185,000 kilograms of acetic anhydride from twenty shipments. Id.
However, once the precursors enter Colombia, the transactions become murky and the precursors exit the formal economy, disappearing into the narcotrafficking pipeline. Individuals responsible for “disappearing” precursor shipments include so-called “rogue” importers or chemical wholesalers, companies fronting for drug traffickers, or organized criminal groups. The methods for diverting precursors include: mislabeling shipping containers; forging or altering tracking and shipping documentation; and coercing officials or business employees with threats of force or bribery. Where tracking protocols and law enforcement vigilance have been a significant obstacle, drug traffickers and the illegally armed groups involved in drug trafficking resort to simply hijacking shipments or embarking on elaborate international smuggling operations from source or transit companies. Moreover, the illegally armed groups can utilize their military power in hijacking precursor shipments, not only within Colombian territory, but elsewhere in Latin America where the groups maintain a presence, such as in Argentina, Paraguay, Brazil, Panama, and Venezuela.

Despite claims that protocols are in place to track and seize shipments that fall outside the legitimate chemical supply industry, the production of illegal drugs in Colombia continues to soar. Something is lacking in the government regulation entities because drug traffickers continue to produce a steadily escalating output of cocaine and heroin that is dependent on an ample

459 Id.
460 Id.
461 Id.
462 Id.
463 See ONDCP Fact Sheet, supra note 451.
465 See ONDCP Fact Sheet, supra note 451.
supply of precursor chemicals. The chemicals must be getting through somehow. One must ask how, given the many mechanisms now in place by domestic and international drug control agencies to stop the flow of precursors. It can only be assumed that either tracking and seizure figures are inaccurate, the amount of precursors getting into Colombia is far greater than reported, or that corruption is present in the agencies tasked with tracking and seizing the precursor trade.

Once the precursors enter the illegal pipeline and arrive at remote labs throughout the Colombian territory, the chemicals are stored for use in hazardous circumstances. The mishandling of the chemicals during the "cooking" process poses present and long-term health dangers to the processors, and expose residual chemicals, fumes, and waste products to the environment.

In 2002, the International Narcotics Control Board released a report on the Implementation of Article XII of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988. Annex II of the report provides a sobering analysis of the amount of the precursors required to produce 100 kilograms of cocaine hydrochloride. First, 100 to 400 liters of sulphuric acid are needed to convert the coca leaf to coca paste. Twenty kilograms of potassium permanganate are then used to convert the paste into cocaine base. Finally, 1,500 to 2,000 liters of acetone/ethyl ether/methyl ethyl ketone/toluene are needed to convert the base into the finished product of cocaine hydrochloride ("HCL").

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466 Id.
467 Id.
468 Id.
470 Id.
471 Id.
472 Id.
The following table estimates the amount of some precursors used in 2000, according to a report by the Colombian Defense Ministry:

<table>
<thead>
<tr>
<th>Precursor/Compounds</th>
<th>Amount per hectare</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone</td>
<td>38.01 liters</td>
<td>6,207,095</td>
</tr>
<tr>
<td>Ammonia</td>
<td>15 liters</td>
<td>2,564,069</td>
</tr>
<tr>
<td>Chloridric Acids</td>
<td>28.78 liters</td>
<td>4,698,771</td>
</tr>
<tr>
<td>Ethyl Acetate</td>
<td>57.02 liters</td>
<td>9,310,643</td>
</tr>
<tr>
<td>Gasoline</td>
<td>2,190 liters</td>
<td>357,741,451</td>
</tr>
<tr>
<td>Plaster</td>
<td>658 kilograms</td>
<td>107,522,751</td>
</tr>
<tr>
<td>Potassium Permanganate</td>
<td>1.90 kilograms</td>
<td>310,697</td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>3.14 kilograms</td>
<td>513,380</td>
</tr>
<tr>
<td>Sulfuric Acid</td>
<td>10 liters</td>
<td>1,709,379(^{473})</td>
</tr>
</tbody>
</table>

To give one a sense of how much these resources are utilized by narcotraffickers, the amount of gasoline used to process base in 2000 alone “is equal to 3.12 days of gasoline consumption in the state of California or to 6.8 days of current and extra gasoline consumption in all Colombia.”\(^{474}\)

The conversion of 100 kilograms of opium paste into heroin requires precursors.\(^{475}\) One hundred to 400 liters of acetic anhydride are used to convert the opium paste into a heroin paste; 1,500 to 2,000 liters of acetone/ethyl ether and thirty liters of

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\(^{474}\) Id.

\(^{475}\) See INT'L NARCOTICS REPORT, *supra* note 469.
hydrochloric acid are used to convert heroin paste into the finished product of heroin hydrochloride.\textsuperscript{476}

Continuation of the drug trade requires a reliable and seemingly inexhaustible supply of precursor chemicals. As worldwide demand for cocaine and heroin persists, chemical brokers, smugglers, and hijackers will continue to find ways to provide the chemicals necessary for drug traffickers to produce their illicit product. The environment in which the labs are located will continue to be contaminated, and many workers who manufacture drugs will be physically harmed.\textsuperscript{477} Unless and until Colombia and its law enforcement take strong enough steps to cut the supply of precursors, the fragile environment in which the drugs are produced will continue to face potentially irreparable harm.

Needless to say, individuals involved in the illicit manufacture of controlled substances in Colombia’s tropical forests have little regard for the impact their activities have on the surrounding environment. Because the drug labs are located in clandestine hideaways in isolated jungle campsites and mountain enclaves, leftover chemical residues remain when the processing camps are abandoned.\textsuperscript{478} The residues and unused chemicals eventually pollute the groundwater aquifers, and get into watercourses, where the toxins are spread over a wide area.\textsuperscript{479} The fields may be subjected to cultivation at a later time and the toxins may be dispersed into the food chain.\textsuperscript{480} Water dispersal brings the chemicals into contact with humans and animals dependent on the water sources for sustenance and agriculture.\textsuperscript{481} The chemical residues

\begin{footnotesize}
\textsuperscript{476} \textit{Id.}
\textsuperscript{477} \textit{See Press Conference, John Ashcroft, U.S. Attorney General, Indictments for Drug Trafficking, FEDERAL NEWS SERVICE (May 6, 2004) (noting that “[d]rug processing uses hundreds of metric tons of toxic and caustic chemicals, which traffickers then dump in rivers and other water sources in public places, where they constitute a serious public health and environmental hazard. Moreover, clandestine drug labs are often situated in urban neighborhoods, bringing with them a risk of explosion and other dangers to the people and the property in the vicinity.”).}
\textsuperscript{479} \textit{Id.}
\textsuperscript{480} \textit{Id.}
\textsuperscript{481} \textit{Id.}
\end{footnotesize}
also displace oxygen in the water and can literally suffocate marine life, causing a drastic depletion of the aquatic biodiversity in already sensitive areas. The Colombian Ministry of Defense notes that, “[w]ater turbidity may increase so as to block sunlight from plants. Moreover, humans who consume plant or animal products from this polluted food chain are at risk from numerous possible carcinogens.”

A significant area of the national territory suffering from drug lab contamination is too dangerous for environmental monitoring teams to investigate due to the presence of narcoguerrillas and armed narcotraffickers. The Colombian authorities estimate that more than 1,000,000 tons of toxic precursors used in cocaine and heroin processing have been dumped into the environment since the mid-1980s. Assumptions as to what is occurring in the Colombian tropical forests can also be drawn from studies performed in neighboring countries where cocaine and heroin is produced in similar natural surroundings. In the late 1980s, significant long-term damages resulted from coca processing in the Upper Huallaga Valley of Peru. More than 100,000,000 liters of gasoline, kerosene, sulfuric acid, and toluene were dumped into the watercourses of the Huallaga River, which feeds into the Amazon River basin. The tributaries of the Huallaga suffered mass destruction of plant and animal life that “far exceeded pollution standards established by the World Health Organization.”

A similar situation arose in Bolivia, where toxic chemicals contaminated the sites of more than 11,000 coca paste labs that were discovered and destroyed in the late 1980s. Colombia can expect similar results given the impact of coca and heroin processing on other Andean and Amazonian regions.

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482 Id.
483 Id.
485 Id.
486 See generally Chemical Dumping, supra note 478.
487 Id.
488 Id.
489 Id.
490 Id.
3. Environmental Terrorism by Armed Groups

In Colombia, there is a residual impact to the environment despite the relatively isolated and contained sites of armed conflict. This occurs during attacks between combatants or on civilian populations, which includes the burning of vehicles, firebombing of buildings, disruption of the utilities infrastructure, and collateral damages due to the proliferation of landmines. Likewise, the impact on the environment, by the human and industrial detritus attendant to the jungle encampments of armed groups throughout the Colombian territory, cause potentially long-term concerns. But the more odious attacks on the environment by armed groups in Colombia involve the guerrilla campaign against the nation’s oil and gas industry, including drilling sites, pipelines, and refineries. Guerrilla groups in Colombia have used “[d]eliberate attempts to damage the environment as a tactic of war against the formal enemy and as a means of instilling terror in the general populace.”

ELN, with cooperation from FARC, has been responsible for more than 900 sabotage attacks against the Cano-Limon-Covenas oil pipeline since 1986. Of the 346 terrorist incidents listed in the State Department’s Patterns of Global Terrorism report for 2001, fifty-one percent (178 of the attacks) were carried out against the Cano Limon pipeline by ELN and FARC. Operated by

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492 See Environmental Consequences of the Illicit Coca Trade, supra note 484.
493 See Trade Environment Database Projects, Petroleum Mining and the U'wa Indian Community, available at http://www.american.edu/TED/colspill.htm#r3 (last visited Nov. 8, 2004) (explaining that in “Colombia, oil and violence are closely tied. Colombia’s left-wing guerrilla groups continuously attack the oil industry installations because they are viewed as strategic targets.”).
496 Peter Kiernan, US Plays Bigger Role in Latin America As It Aims to Boost Non-Arab Oil Supplies, OIL DAILY, July 8, 2002.
Occidental Petroleum and based in Los Angeles, California, the Cano Limon pipeline runs 770 kilometers, from the Cano Limon oilfields in the Arauca Department of north-central Colombia through a remote area of northeast Colombia; the pipeline connects with oil tankers at the Colombian port of Covenas on the Caribbean coast.\textsuperscript{497} The Cano Limon oilfield produces about twenty percent of Colombia’s crude oil.\textsuperscript{498} According to various sources, the pipeline carries anywhere between 110,000 and 225,000 barrels of oil per day.\textsuperscript{499} Guerrillas have attacked the pipeline more than 940 times since 1986, spilling an estimated 11,000,000 barrels of oil into the surrounding environment\textsuperscript{500} (approximately forty-three times the amount spilled by the 1989 Exxon Valdez disaster in Alaska).\textsuperscript{501} These spills have resulted in an estimated revenue loss of two billion U.S. dollars.\textsuperscript{502} The impact of crude oil spills into local rivers, causing contamination of the wildlife and fish, has extended beyond Colombia’s borders into neighboring Venezuela.\textsuperscript{503} Venezuela requested monetary compensation from Colombia, but reached an agreement in which Colombia will instead pay the actual cleanup costs of the crude oil spills, which does not include compensation for environmental damages.\textsuperscript{504}

ELN and FARC attacked the pipeline at least 150 times in 2000 and 170 to 180 times in 2001.\textsuperscript{505} In 2001, ELN and FARC

\footnotesize{\textsuperscript{498} See Dudley, supra note 497, at 28.}
\footnotesize{\textsuperscript{499} See Kiernan, supra note 496; see also Semple, supra note 495, at 2.}
\footnotesize{\textsuperscript{500} Report to Congress, supra note 497.}
\footnotesize{\textsuperscript{501} The Exxon Valdez tanker ran aground in 1989 and dumped approximately 257,000 barrels of oil into Prince William Sound, of which approximately 36,000 barrels were ultimately recovered. See Exxon Valdez Oil Spill Trustee Council, Oil Spill Facts: Questions and Answers, at http://www.evostc.state.ak.us/facts/qanda.html (last visited Oct. 10, 2004).}
\footnotesize{\textsuperscript{502} Report to Congress, supra note 497.}
\footnotesize{\textsuperscript{503} See Austin & Bruch, supra note 29, at 3-4.}
\footnotesize{\textsuperscript{504} See id. See also Eric Feldman, Introduction to Part IV of THE ENVIRONMENTAL CONSEQUENCES OF WAR: LEGAL, ECONOMIC, AND SCIENTIFIC PERSPECTIVES 469-75, supra note 29.}
\footnotesize{\textsuperscript{505} The actual numbers of attacks seem to vary among sources. However, the number of attacks is unprecedented. See Kiernan, supra note 496.}
attacks kept approximately 65,750 barrels of oil per day from reaching the terminal in Covenas. In 2002, attacks against the pipeline tapered off as a result of increased security patrols by the Colombian Army’s 18th Brigade and 5th Mobile Brigade, “to an average of five times a month—compared to fourteen times a month [in 2001], according to the US Energy Information Administration (“EIA”). Leftist rebels are also suspected to be responsible for the November 2002 attack on Colombia’s largest export pipeline in the eastern Casanare Department.

It could be argued by someone sympathetic to the guerrillas’ tactics against oil infrastructures that attacks against the oil and gas infrastructure are no more damaging to the environment and local inhabitants than the ecological impact of oil and gas drilling and transportation operations. In one example, twenty-five families in the northern Antioquia Department near the town of Zaragoza demanded compensation of approximately £600,000 from British Petroleum (“BP”), a major partner in Colombia’s oil and gas industry, for damages arising from pipeline construction through their lands. According to a report by the Colombia Solidarity Campaign,

The pipe was laid along the higher ground of undulating terrain, with the peasant plots directly below. ODC [Oleoducto de Colombia] stripped all the trees from along the pipeline corridor, leaving it without vegetation, exposed to water and wind erosion. The earth moving operations caused avalanches, blocked springs and diverted streams. Works for the pipeline

506 Id.
507 See Report to Congress, supra note 497.
508 See Kiernan, supra note 496.
509 Colombia’s Chief Pipeline Bombed, OIL DAILY, Nov. 25, 2002. The Cusiana-Cupiagua fields produce nearly half of the 600,000 barrels of oil produced each day in Colombia and are operated by British Petroleum partners. The pipeline is also owned by Total Fina Elf of France, holding nineteen percent, and Triton Energy of the United States, a subsidiary of Amerada Hess, which possesses twelve percent. Id.
510 Andy Higginbottom, BP and Pipeline Damage in Colombia, Colombia Solidarity Campaign, at http://www.colombiasolidarity.org.uk/Solidarity%201/bppipeline.html (last visited Oct. 11, 2004).
511 Id. Colombia’s state oil company, Ecopetrol, created ODC to run the pipeline project. Id.
destroyed 150 water sources along the Zaragoza section. ODC’s restoration work was carried out badly, topsoil was not replaced, and sacks of earth had rotted away within a few months. Farm animals that ate the synthetic sacking were poisoned. The peasants lost their fruit trees and other crops.\textsuperscript{512}

The peasants were forced to abandon their lands and, as of April 2001, had still not reached a compensation agreement with British Petroleum.\textsuperscript{513} Oil and gas operations also cause stress to the surrounding environment, especially in developing countries with little oversight or control over enforcing the regulations enacted to protect the environment and indigenous inhabitants.\textsuperscript{514} Environmental damage caused by oil companies are a result of negligence or even corruption, whereas damages caused by the guerrillas are intentional acts of war against the State and against vital industrial sectors of the economy.\textsuperscript{515} Therefore, guerrilla attacks must be treated as threats to Colombia’s national security, and in the author’s opinion, the appropriate response is military action.

The guerrillas, for example, routinely target water resources and hydroelectric power grids nationwide. In May 2003, in less than one week, rebels destroyed eighteen electrical towers, disrupting power in much of northern Colombia, and sabotaged a water aqueduct and hydroelectricity plant near Cali.\textsuperscript{516} The attacks disrupted water supplies to Cali and cut power to the Pacific port of Buenaventura, which handles about sixty percent

\textsuperscript{512} Id.
\textsuperscript{513} Id.
\textsuperscript{514} See Regulation and the Environment, 75 PLATT’S OILGRAM NEWS, July 28, 1997, at 3 (describing what occurred when oil companies were allowed to drill in Ecuador’s Amazon region of Oriente, where weak environmental laws and regulations resulted in devastating consequences for the fragile jungle ecosystem).
\textsuperscript{515} See generally Juliette Kerr, US Advisers to Train Army to Defend Oil Pipeline, WORLD MARKETS ANALYSIS, Oct. 21, 2002 (reporting that ELN has long considered Colombia’s oil pipelines legitimate military targets).
of the coffee shipments out of Colombia. While such attacks do not pose a direct threat to the environment per se, these attacks target environmental resources and are acts of war against the State and its economy.

The guerillas also cause significant concern by gaining control of vital natural resources through methods such as “gunpoint conservation,” a tactic previously explained. Since the middle of the last century, guerrillas have controlled the Sumapaz reservoir, located on the high plateau in the eastern Andes Mountains and considered one of the five major components of the national water reservoir grid. FARC, now in control of this region, has the potential to keep the water from reaching Bogotá, a tactic that could result in a disastrous water shortage by 2015 if the guerrillas retain control.

The guerrillas have previously used such tactics. In March 2002, a FARC unit seized a pumping station on the Rio Bobo reservoir and forced engineers to shut the flow of water to the 500,000 residents of Pasto, the provincial capital of Nariño Department. ELN occupies the Serrania de San Lucas in order to control the vast hydrological resources critical to satiating the thirst of the people of Bogotá. Control over such water resources serves as “a demonstration of authority and a manifestation of a broader ideological program.”

While such attacks against the water and power infrastructure cause economic more than ecological damage, there is still an environmental impact at the site of these attacks. Structures must be repaired, flooding from attacks to aqueducts and dams causes serious erosion, industrial chemicals are spilled into the local environment, and the livelihoods of local inhabitants are negatively impacted.

518 See supra notes 26-27 and accompanying text.
520 See id.
523 Id.
C. Government Interdiction and the Environment

The Colombian government’s policy to eradicate coca and poppy cultivation is achieved primarily through aerial fumigation and manual eradication operations. The aerial campaign has been harsh and justifiably criticized by environmental and human rights groups. Between 1994 and 2001, about 368,238 hectares of coca, and about 48,549 hectares of opium poppies were eradicated nationwide. However, these figures appear overly optimistic and misleading. Under environmental regulations enacted in the early 1990s, the Colombian National Anti-narcotics Agency created the Environmental Management Plan for Illicit Crop Eradication, which excludes eradication operations “in zones of the National Natural Parks System, bodies of water, human settlements, and areas of economic interest, including the buffer areas for these elements, and zones with a plant layer other than illicit crops.” If these areas are exempt from eradication, then it seems obvious that these will be areas of intense interest for growers to exploit.

Data gathered by the Colombian Defense Ministry in 2000 indicated that coca and poppy growing has expanded significantly into the national park system. According to calculations, a total of 4,660 hectares of coca and 199 hectares of opium poppy were being grown inside national park boundaries, resulting in the deforestation of more than 14,500 hectares of land, an area “equivalent to 5.2 times the size of Washington, D.C.” Another example is the La Paya National Natural Park in central Putumayo,

524 See MINISTRY OF JUSTICE, supra note 395, at 21-22.
525 Id.
526 Id.
528 See MINISTRY OF JUSTICE, supra note 395, at 23.
where a survey indicated that about 1267 hectares of park territory is used for coca cultivation.\textsuperscript{530}

The war against coca cultivation presents a "lose-lose" situation for Colombia's stressed environment. Aerial fumigation causes environmental contamination and displacements of agriculture settlements.\textsuperscript{531} Fumigation may reduce coca and poppy production in some areas, but the effort accelerates deforestation elsewhere.\textsuperscript{532} As more coca crops are eradicated or fumigated, growers move deeper into Colombia's forests to clear land for more coca fields, and at some point, eradicated areas will have been completely substituted for new plots of land.\textsuperscript{533} It is analogous to constricting a filled balloon at one spot and seeing it bulge in another.

VI. HUMANITARIAN CONSEQUENCES OF THE ARMED CONFLICT\textsuperscript{534}

The humanitarian devastation caused by the environmental damage and the lack of enforcement of the existing legislation have been discussed. This Section addresses the massacres and massive displacement due to the conflict. Only a few examples are given because the record of abuse is too long.

The power struggle over the nation's resources and profits from the business of illegal drugs has resulted in the systematic displacement of thousands and, in many situations, entire villages. "Colombia has produced one of the world's largest uprooted populations, with one million people registering with the government as displaced between 2000 and 2003, and unofficial estimates of

\begin{footnotesize}
\begin{itemize}
\item[\textsuperscript{530}] See id.
\item[\textsuperscript{531}] Id.
\item[\textsuperscript{533}] See William Mullen, Preservation vs. Profit, CHICAGO TRIBUNE, Apr. 12, 2004, at 1 (reporting that eradication campaigns in the Huallaga Valley have forced farmers and traffickers deeper into forested areas to avoid detection by security and counternarcotics forces).
\item[\textsuperscript{534}] For the sake of brevity, this Section will mainly address the plight of the Afro-Colombians and Colombian Indians whose territories are the battle-grounds of the armed conflict.
\end{itemize}
\end{footnotesize}
3 million since 1985. These Colombians are too often caught in the crossfire of a battle between illegal actors and the government or guerrillas and paramilitary groups.

The most affected by the conflict are the underprivileged, the powerless, and the less protected individuals of the society who make up the rural peasantry and indigenous population. This includes Colombian Indian groups, Afro-Colombians, and peasants of mixed race (mulattos and mestizos); most of the conflict takes place in the poor and forgotten regions that house these minorities.

Afro-Colombian communities occupy coastal lands with access to ports in the Atlantic and Pacific Oceans. Drug traffickers, guerrillas, and the paramilitaries have sought access to those lands to allow the easy transfer of arms and to control the means by which their illicit goods are shipped. These lands are in a region “rich with gold, emeralds, and oil.” The area also includes pharmaceutically rich rainforest areas, fertile farming lands, and rivers with the potential to provide tremendous hydroelectric power. Coincidentally, the highest levels of displacement have occurred in these very zones after the lands are earmarked for hydroelectric projects and illegal drug production.

The deforestation “had an impact on the traditional indigenous and black settled cultures, affecting their social relations

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536 Goldman Environmental Prize, Libia Grueso: Colombia Sustainable Development (2004), available at http://www.goldmanprize.org/recipients/recipientProfile.cfm?recipientID=132 (last visited Oct. 10, 2004) [hereinafter Libia Grueso]. Colombia's Pacific Coast region, home to part of Colombia's rainforest, houses "30 percent of Colombia's 10.6 million Afro-Colombians." Armed groups battled in that territory "in pursuit of their cut of the profit, including the introduction of illicit crops such as coca, causing terrible and widespread devastation." Id.
537 AFRO-COLOMBIANS, supra note 535, at 4.
538 Id.
539 Id.
540 Id.
541 Id.
and their links with nature.\textsuperscript{542} The war threatens not only these groups' cultural and environmental values, but the forced displacement also threatens their lives. The battle over the resources and the profits from the illegal drug industry on the Pacific Coast has resulted in several massacres of innocent civilians, including children and women. Many survivors are forced to leave, triggering the "systematic displacement of more than one million Afro-Colombians."\textsuperscript{543}

In the Cauca Department, paramilitaries and guerrillas massacred approximately 120 civilians in several villages.\textsuperscript{544} In the town of Alto Naya, 150 people were killed;\textsuperscript{545} 40 of the victims, including a 17-year-old girl, were murdered with machetes and chain saws.\textsuperscript{546} These confrontations caused massive displacements--in two years, 7,200 people were displaced in the port city of Buenaventura alone.\textsuperscript{547}

There are several reasons for the massacres and subsequent massive displacements in Alto Naya. This town has "large local deposits of natural resources, such as gold and precious woods," several coca fields, is situated in a strategic location "on a river used by guerrillas for transporting troops and arms," and some claim that ELN uses the dense surrounding jungle to hide kidnapped victims.\textsuperscript{548} The mineworkers union produced a series of maps in which "there appears an almost perfect correlation between paramilitary forced displacement and the existence of natural resources."\textsuperscript{549}

\textsuperscript{542} Id.
\textsuperscript{543} See Libia Grueso, supra note 536.
\textsuperscript{544} Id.
\textsuperscript{545} Id.
\textsuperscript{547} See Libia Grueso, supra note 536.
\textsuperscript{549} Id.
On May 2, 2002, Afro-Colombians residing in Bojayá were victims of one of the worst massacres as a result of the fight between FARC and AUC “for control of strategic jungle smuggling routes in the remote region bordered by the Pacific Ocean and Panama.” As the fighting raged, Afro-Colombians from the area fled to a concrete church, which collapsed when struck by one of FARC’s rockets. At least 120 innocent civilians died, “including more than 40 children.” One of the victims “sought refuge in the church with his pregnant wife and five daughters, aged from 2 to 10, in the evening on May 1. The next day he was the only one in his family to walk out alive.” Bojayá is located in “[t]he strategic corridor down the Atrato River,” which “is a key route for smuggling cocaine out of Colombia and weapons into the country.”

Indigenous people inhabit several regions that are under siege. Colombia considers indigenous people a “national patrimony of invaluable cultural and social wealth,” and since 1991, the government has enacted massive amounts of legislation protecting their rights. Yet in reality, these laws are only printed pieces of paper.

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550 See Garry Leech, *Turning a Blind Eye*, COLOM. J. ONLINE (May 15, 2002), at http://www.colombiajournal.org/colombia113.htm. The Bojaya massacre is another example of a the Colombian government’s abandonment of the poor black areas of the nation. In March 2000, after FARC attacked the local police station, the government “withdrew all security forces stationed in the area.” Id. FARC consolidated control over the region after defeating the local paramilitaries. In mid-April, the paramilitaries were moving back into the region: “450 heavily armed paramilitary fighters from the United Self-Defense Forces of Colombia (AUC) traveled down the Atrato River in eleven boats (according to the UN report, 250 AUC fighters in seven boats). Somehow this large conspicuous force passed unheeded through several military checkpoints along the river.” Id. The arrival of the paramilitaries triggered several pleas to Bogotá for military protection to avoid “civilians being caught in a crossfire between the illegal armed groups.” Id.


552 Id.
553 Id.
554 Id.
555 COMISION INTERAMERICANA DE LOS DERECHOS HUMANOS, SEGUNDO INFORME SOBRE LA SITUACION DE LOS DERECHOS HUMANOS EN COLOMBIA, ch. XI (1993), available at http://www.cidh.oas.org/countryrep/Colombia93sp/cap.11.htm (last visited Oct. 11, 2004). There are 600,000 Indians living in twenty-five percent of the national territory. They are organized in eighty-one groups, and speak seventy-five different languages. Id.

556 See generally id. (explaining the rights of indigenous people in Colombia).
One of these areas of national patrimony is the Catatumbo territory located in northeastern Colombia in the department of Norte de Santander. In 1989, the government declared this region the Catatumbo-Barí Natural National Park because of its rich forest and biodiversity. The Motilón-Barí indigenous community lives in Catatumbo, and comprises sixteen small communities.

In 1978, the government deemed this area an indigenous territory. The indigenous communities enjoyed territorial jurisdiction and autonomy in their structural organization, culture, and beliefs. The territorial privileges enjoyed by the indigenous community did not go unnoticed by the guerrillas.

Also in 1978, ELN settled in the Catatumbo region where it could not only harass the Motilón-Barí community, but also grow coca and carries out various terrorist activities. ELN kidnaps anyone who tries to help the Indian community gain control of the Catatumbo region because the region is vital to ELN's hegemony. In the Catatumbo, ELN can consolidate its economic and military power. The region's geographic position allows ELN to strengthen its power in coca production, and dominate the

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558 Colombia Objectiva, supra note 99. This region has an area of 158,125 kilometers and 616 bird species are close to extinction in its humid forests. Id.
559 Id. The community has 2,137 inhabitants distributed in sixteen communities in the northeastern region of the Norte de Santander Department. Id.
560 Id. There are two reservations in the Motilona region. The first reservation, the Convención municipality, contains the following villages: Ikiakarora, Okbadukayra, Suarena, Brevucanina, Nacyadukaira, Akangbarinkaira, Bachindikaira, Atirind, Ikaira, Trindikayra, Korronkayra, Birindikayra, Kantra Kuigday Kaira, Kiribado Kaira, Siriko Kaira, and Soro Kayra y Shubaâbarina. The second reserve, Motilon La Gabarra, is located in the municipality of Gabarra with the following villages: Catalaura, Caricacha, Boquira, Bocabouira and Sagbadana. Id.
561 Id. The land was designated an indigenous territory under Resolution 102 of November 28, 1978, registered with the Minister of Government and the Commission on Indigenous Affairs of Colombia. See Colombia Objectiva, supra note 99.
562 Id.
563 Id. ELN ceased terrorist activities from the area until 1982. Id.
564 Id. ELN kidnapped Bruce Olson, a Canadian citizen helping the Indian community. The Indians considered Olson one of them because he had brought well-being to the community with his work in health, community organization, and education. Id.
565 See Colombia Objectiva, supra note 99.
corridor for the traffic of guns brought from Nicaragua and Venezuela by way of Lake Maracaibo and Catatumbo River.\textsuperscript{566} Today, the region is an important area of cultivation and production of coca, with more than 30,000 hectares of land used for cultivating coca.\textsuperscript{567} There are several coca laboratories in the region, and the final product leaves the country through Maracaibo Lake.\textsuperscript{568} Production exceeds 2,000 kilos per week, and ELN receives 60,000 pesos per kilo.\textsuperscript{569} ELN has prohibited the traditional activities and industries such as lumber, agriculture and livestock, and forces the residents to work in the coca business.\textsuperscript{570}

The Indians face not only threats against their culture and patrimony, but also threats to their lives and stability.\textsuperscript{571} "Their territories have been occupied by dams, pipelines, roads, illegal crops, oil and mine explorations, big haciendas, extensive cultivation of African palm, National Natural Parks and so-called ecotourism."\textsuperscript{572} In speeches and laws, the national government promises to respect the human rights of the Indians.\textsuperscript{573} However, after the enactment of the 1991 constitution, the nation has seen an increase in the violation of their human rights; the statistics show that more than 3,500 Indians have been displaced by the violence.\textsuperscript{574} Many hundreds have been murdered. In 2000, there were 1,012 homicides in the Sierra Nevada.\textsuperscript{575} In the first half of 2003 alone, 118 Indians were killed.\textsuperscript{576} There have been many

\textsuperscript{566} Id.  
\textsuperscript{567} Id.  
\textsuperscript{568} Id.  
\textsuperscript{569} Id. The wealth of the area attracts narcotraffickers from other parts of Colombia and countries such as Venezuela. They carry as much as 400 million pesos to purchase the product. Id.  
\textsuperscript{570} See Colombia Objectiva, supra note 99. An ELN deserter said that he left because he did not like to scrape the coca leaves. Id.  
\textsuperscript{571} See Luis Evelis Andrade, Colombia: Por el Conflicto Armado, la Cultura y Patrimonio Indígena en Vía de Extinción, available at http://www.biodiversidadla.org/article/articleview/4887/1/24/ (last visited Oct. 11, 2004).  
\textsuperscript{572} Id.  
\textsuperscript{573} Id.  
\textsuperscript{574} Id.  
\textsuperscript{575} See Paraíso Sitiado, supra note 276, at 51.  
accusations against the criminals and government officials for rape and abuse, both physical and verbal.\textsuperscript{577} Moreover, there is a prohibition on free movement in their own territory and the food supply to their communities is restricted.\textsuperscript{578} The fear generated by the presence of the armed actors prevents the entrance of vaccinations, medicine, and groups of physicians.\textsuperscript{579}

The Arhuaco, Kogi, and the Arsario tribes living in the Sierra Nevada de Santa Marta are caught in the crossfire between the army, left-wing guerrillas and right-wing paramilitaries.

The lower slopes of the mountain have been colonised by settlers, many of them growing coca and heroin poppies for the drug trade. Dozens of Indians have been killed in the quasi-civil war raging on their land. In February this year an Arsario village was bombarded for several days by the Colombian army, forcing the inhabitants to flee.\textsuperscript{580}

Because of its biodiversity and strategic location, the Sierra Nevada is key for the actors in the internal conflict.\textsuperscript{581} The water from the Sierra Nevada supplies thirteen municipalities and all the flat zones of the Atlantic Coast, which support the agro-export industry.\textsuperscript{582} The Sierra’s proximity to the ocean facilitates

\textsuperscript{577} See Stephen Ferry, \textit{Keepers of the World}, 206 \textit{National Geographic}, Oct. 2004, at 50, 53 (quoting an aman of the Kogi tribe describing the conflict raging in the Kogi terrorities in the Santa Marta range: “All sides—guerrillas, army, and paramilitaries—are the same . . . . They say they fight to defend the Indian, only to turn around and try to destroy us.”).

\textsuperscript{578} See Paraíso Sitiado, supra note 276, at 52. The military commander of the zone requested a census of Indian families in Sierra Nevada to calculate the maximum amount of food supply each family could purchase. Each week the army allowed only two truckloads of food into the area to supply the Indian population, and apparently the rationale is that the army does not want the Indians to supply the guerrillas with food. However, the guerrillas are turning around and stealing the only cows and sustenance crops on which the Indians have to survive. The paramilitaries also designate those who can purchase Indian products, charging $50 to $100 pesos per kilo of coffee leaving the Sierra Nevada. Id.

\textsuperscript{579} Andrade, supra note 571.


\textsuperscript{581} See Paraíso Sitiado, supra note 276, at 52.

\textsuperscript{582} Id.
both the smuggling of legal and illegal contraband and the provisioning of arms for the guerrillas, the paramilitaries, and the narcotraffickers. "Moreover, it is a strategic corridor that extends from the Venezuelan border to the Urabá region, and it includes regions of Cesar and the Ciénaga Grande of Santa Marta as corridors toward the region of Córdoba." In other words, the Sierra Nevada region is key to the survival of Colombia's illegal armed groups.

One of the most violent places in Colombia is Barrancabermeja, a city traditionally controlled by ELN. Its location along the Magdalena River in northern Colombia provides a water route to the Caribbean Ocean. "Much of the cocaine grown in surrounding areas passes through Barrancabermeja en route to the Caribbean coast." The city refines "80 percent of the nation's oil and stands at the heart of the fertile cattle ranching lands and rich coca producing areas of northern Colombia." In 2001, AUC battled to seize control of the city's nearby areas. From January to April, AUC was responsible for the murder of approximately 180 civilians in Barrancabermeja and caused more than 4,000 residents to flee. It is important to understand that the displacements harm the environment as displaced communities struggle to survive off the land by clearing untouched areas for new living space and for planting crops, thereby causing human waste and trash, soil erosion, and deforestation.

VII. CONCLUSION

Colombia's violence reflects the State's incapacity to enforce the existing laws, and a society with weak social and individual restrictions. Violence and drug trafficking are just symptoms of an impotent State and its social problems. Colombia's dysfunctional public order has triggered the development of a "private

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583 Id.
585 Brutal Violence in Colombia, supra note 546.
586 See Voeten, supra note 584.
587 Id.
order” through paramilitarism. In the absence of state presence through police force, school systems, hospitals and courts, citizens have sought their own ways to assure protection without relying on the State. As demonstrated by the situation in Colombia, “dysfunctional governance can exacerbate conflict and its environmental impact.”

The internal armed conflict in Colombia cannot justify failing to implement or apply environmental and humanitarian legislation. Colombia is a party to many international protocols and conventions, and it has enacted domestic legislation to protect the environment and its citizens. However, without effective enforcement, Colombia’s laws are merely token efforts that provide little more than illusions to the world community. If Colombia had been strong enough to enforce its own laws in times of peace, it would not be so hard to protect the rule of law during times of internal conflict. However, because Colombia lacks the resolve to fight for the rule of law, little can be done to hold the illegally armed actors and renegades within the government accountable for their many environmental depredations.

During this time of conflict, not only do Colombian laws apply, but also the treaties to which Colombia is a signatory. Perhaps, the international community should compel Colombia to fulfill not only its international human rights obligations, but also its international environmental obligations.

The Colombian conflict has created an environmental and humanitarian crisis. For many years, Colombia ignored the political violence in rural areas, resulting in decades of displacement, which in turn caused more violence and degradation of the environment, because the refugees needed to replace the shelter, food, water, and sources of income taken from them by the conflict. The violence is perpetuated because the society sees the displaced as unwanted leftovers—burdens to the lifestyles of those more fortunate. “To resolve the problem of the displaced, implies no less than to remake a nation, which means at the same time its society and institutions.”

588 Price, supra note 214, at xvi.
589 Pécaut, supra note 22, at 23.
Resolving social and economic inadequacies, dealing decisively with illegally armed groups, bringing the rule of law and humanitarian relief to rural and isolated regions, instituting equitable land distribution and instilling certainty of property rights through committed management, and sharing of natural resources are all essential to slowing the destruction of Colombia's environment, its precious environmental resources, and its indigenous communities.