

# Are Aerial Fumigations in the Context of the War in Colombia a Violation of the Rules of International Humanitarian Law?

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## ABSTRACT

Violations of international humanitarian law (“IHL”) by all actors—including the government, left-wing rebel groups, and right-wing paramilitaries—in the Colombian internal conflict are well documented.<sup>1</sup> They include kidnappings, disappearances, torture, and extra judicial killings.<sup>2</sup> This Article examines the Colombian government’s aerial fumigations of coca crops and argues that they are violations of IHL. It

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<sup>1</sup> See, e.g., *Colombia: Armed Conflict Continues to Be Marked by Serious IHL Violations*, INT’L COMM. OF THE RED CROSS [ICRC], July 6, 2004, <http://www.icrc.org/web/eng/siteeng0.nsf/iwpList248/9EE7C36EA1CEFB20C1256EC9004FFFBB> [hereinafter ICRC, *Armed Conflict*].

<sup>2</sup> See Amnesty Int’l, *Colombia: ‘Leave Us in Peace!’: Targeting Civilians in Colombia’s Internal Armed Conflict*, AI Index AMR 23/023/2008, Oct. 28, 2008, available at <http://www.amnesty.org/en/library/asset/AMR23/023/2008/en/65b11bee-a04b-11dd-81c4-792550e655ec/amr230232008eng.pdf> [hereinafter Amnesty Int’l, *Colombia*].

initially looks at the legal framework in which IHL applies in Colombia, then at the impact of aerial fumigations on the health of the affected population, the environment, and the eradication of coca crops. Finally, it analyzes whether this spraying can be classified as a violation of IHL.

It should be noted at the outset that Colombia also may be violating international human rights law by fumigating. However, that issue is beyond the scope of this Article, as are the remedies for IHL violations that this Article describes.

### I. BACKGROUND TO THE CONFLICT

This Article concentrates on aerial fumigations after the Colombian government's launch of Plan Colombia in 2000.<sup>3</sup> Former President Andres Pastrana initially conceived Plan Colombia as a six-year mission to end the conflict, further security and development, and eliminate drug trafficking.<sup>4</sup> The United States is the primary funder of Plan Colombia, though Colombian policymakers anticipated that many countries would participate.<sup>5</sup> As a result of Plan Colombia's campaign against drug cultivation and trafficking, the Colombian government greatly increased aerial spraying of coca plants since 2000. From 2000 to 2008, the U.S. government spent \$458 million on drug eradication in Colombia.<sup>6</sup>

In 1999, net cultivation of coca stood at 122,500 hectares of land and the Colombian government used aerial spraying on 43,426 hectares of land.<sup>7</sup> The Colombian government used manual eradication for the first time in 2004.<sup>8</sup> By 2007, the Colombian National Police ("CNP") and Anti-Narcotics Directorate ("DIRAN") increased aerial spraying to 153,133 hectares, and increased manual eradication to 66,396 hectares.<sup>9</sup> Coca cultivation in 2007 also increased to 167,000 hectares, up from 136,200 hectares in 2000.<sup>10</sup> The government has also targeted poppy fields as part of the eradication

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<sup>3</sup> CONNIE VEILLETTE, PLAN COLOMBIA: A PROGRESS REPORT 2 (Cong. Research Serv., CRS Report for Congress Order Code RL32774, May 9, 2005), available at <http://www.au.af.mil/au/awc/awcgate/crs/rl32774.pdf>.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.* at 1.

<sup>6</sup> U.S. GOV'T ACCOUNTABILITY OFFICE, PUB. NO. GAO-09-71, PLAN COLOMBIA: DRUG REDUCTION GOALS WERE NOT FULLY MET BUT SECURITY HAS IMPROVED; U.S. AGENCIES NEED MORE DETAILED PLANS FOR REDUCING ASSISTANCE 28 (2008), available at <http://www.gao.gov/new.items/d0971.pdf>.

<sup>7</sup> U.S. DEPT OF STATE, INCSR: COUNTRY REPORTS—AFGHANISTAN THROUGH COMOROS (2009), available at <http://www.state.gov/p/inl/rls/nrcrpt/2009/vol1/116520.htm> [hereinafter 2009 NARCOTICS REPORT].

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

program.<sup>11</sup> This Article concentrates on coca fields because poppy cultivation is minimal and, in 2007, stood at only 1000 hectares.<sup>12</sup> These numbers show that along with coca cultivation, aerial fumigation has increased greatly since 2000.

The CNP and DIRAN have increased manual eradication efforts due to the backlash caused by aerial fumigation. Manual eradication is a process by which the coca plant is pulled out from the ground by hand, removing the plant for good without requiring the use of chemicals.<sup>13</sup> Although manual eradication may be more effective than aerial fumigation, the U.N. Office on Drugs and Crime (“UNODC”)<sup>14</sup> nonetheless has observed replanting in areas where the government used manual eradication.<sup>15</sup>

## II. IS THERE AN ARMED CONFLICT IN COLOMBIA?

Since its independence from Spain in 1819, conflict has plagued Colombia.<sup>16</sup> The most recent fighting started in the 1960s after the creation of the country’s two largest insurgent groups, the Fuerzas Armadas Revolucionarias de Colombia (“FARC”) and the Ejercito de Liberacion Nacional (“ELN”), both left-wing rebel movements.<sup>17</sup> In 2007, Raul Reyes, Commander of the FARC, estimated that he commanded 18,000 FARC fighters.<sup>18</sup> However, in 2008, news journalists Helen Murphy and Bernard Lo reported that FARC consisted of approximately 8000 fighters.<sup>19</sup> The ELN is a somewhat smaller group, with an estimated 2000 to 3000 fighters; it operates

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<sup>11</sup> 2009 NARCOTICS REPORT, *supra* note 7.

<sup>12</sup> *Id.*

<sup>13</sup> Posting of Admin to CIPCOL.org, *Manual Eradications in Parks: Set Up to Fail?*, <http://www.cipcol.org/?p=175> (Feb. 14, 2006).

<sup>14</sup> United Nations Office on Drugs and Crime, About UNODC, <http://www.unodc.org/unode/en/about-unodc/index.html> (last visited Feb. 1, 2010). The United Nations Office on Drugs and Crime (“UNODC”) is a U.N. organization which assists member states in combating drug trafficking, terrorism, and crime. *Id.* It also prepares annual reports about these issues. *Id.*

<sup>15</sup> UNODC, COCA CULTIVATION IN THE ANDEAN REGION: A SURVEY OF BOLIVIA, COLOMBIA AND PERU 98 (2008), available at [http://www.unodc.org/documents/crop-monitoring/Andean\\_report\\_2008.pdf](http://www.unodc.org/documents/crop-monitoring/Andean_report_2008.pdf).

<sup>16</sup> See STEPHEN JOHNSON, THE HERITAGE FOUNDATION, HELPING COLOMBIA FIX ITS PLAN TO CURB DRUG TRAFFICKING, VIOLENCE AND INSURGENCY (2001), available at [http://www.heritage.org/Research/LatinAmerica/upload/9366\\_1.pdf](http://www.heritage.org/Research/LatinAmerica/upload/9366_1.pdf).

<sup>17</sup> *Id.*

<sup>18</sup> Interview by Garry Leech with Raul Reyes, Commander, Fuerzas Armadas Revolucionarias de Colombia (“FARC”) (July 12, 2007), available at <http://www.colombiajournal.org/colombia259.htm>.

<sup>19</sup> Helen Murphy & Bernard Lo, *FARC Is a Paper Tiger After Offensive Desertions (Update1)*, BLOOMBERG.COM, Oct. 29, 2008, [http://www.bloomberg.com/apps/news?pid=20601086&sid=aCsN3xsYNI0M&refer=latin\\_america](http://www.bloomberg.com/apps/news?pid=20601086&sid=aCsN3xsYNI0M&refer=latin_america).

mostly in the northeastern part of Colombia.<sup>20</sup> The Autodefensas Unidas de Colombia (“AUC”), the main right-wing paramilitary group, formed in response to the leftist insurgents.<sup>21</sup> The AUC officially disbanded in 2006, although a number of individual members have resumed violent and illegal activities since then.<sup>22</sup>

Most commentators, both in and out of Colombia, agree that an armed conflict exists in Colombia. In 2004, the International Committee for the Red Cross (“ICRC”) estimated that the conflict between the government and guerilla forces had gone on for forty years.<sup>23</sup> In 2007, it claimed that despite the demobilization of some paramilitary groups, new armed groups had emerged and clashes were continuing in various areas of the country.<sup>24</sup> In addition, FARC and ELN continued fighting in the Nariño region in Southern Colombia.<sup>25</sup> The FARC acknowledged the existence of an armed conflict in a 2006 letter to the government demanding that negotiations begin on a ceasefire and the end of hostilities.<sup>26</sup> The U.S. Army has acknowledged that Colombia has been “waging an internal struggle for peace” for the last forty years.<sup>27</sup> Finally, the Constitutional Court of Colombia said that Additional Protocol 2 to the Geneva Convention (“AP2” or “Protocol”) is applicable in Colombia,<sup>28</sup> thereby recognizing the existence of an armed conflict.

Various peace talks have not led to the end of the conflict. In 1999, Pastrana transferred an area of 42,000 square miles to the FARC as a prelude to peace talks.<sup>29</sup> These rounds of peace talks ended in 2002 when

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<sup>20</sup> STEPHANIE HANSON, COUNCIL ON FOREIGN RELATIONS, FARC, ELN COLOMBIA’S LEFT-WING GUERRILLAS (2009), available at <http://www.cfr.org/publication/9272/>.

<sup>21</sup> JOHNSON, *supra* note 16. The paramilitary groups, then called “death squads,” were outlawed in 1989. *Id.* They are also involved in the drug trade and regularly attack rebels and perceived sympathizers. *Id.*

<sup>22</sup> U.S. DEP’T OF STATE, 2008 HUMAN RIGHTS REPORT: COLOMBIA (2009), available at <http://www.state.gov/g/drl/rls/hrrpt/2008/wha/119153.htm> [hereinafter 2008 HUMAN RIGHTS REPORT].

<sup>23</sup> ICRC, *Armed Conflict*, *supra* note 1.

<sup>24</sup> Int’l Comm. of the Red Cross [ICRC], *Colombia*, at 290, ICRC Annual Report 2007, May 27, 2008, available at [http://www.themissing.cicr.org/web/eng/siteeng0.nsf/htmlall/7euetc/\\$file/icrc\\_ar\\_07\\_colombia.pdf](http://www.themissing.cicr.org/web/eng/siteeng0.nsf/htmlall/7euetc/$file/icrc_ar_07_colombia.pdf) [hereinafter ICRC Annual Report].

<sup>25</sup> *Id.*

<sup>26</sup> Letter from the FARC to “Compatriots” (Oct. 2, 2006), available at <http://www.ciponline.org/colombia/10022006.htm>.

<sup>27</sup> ADMIRAL JAMES STAVRIDIS, U.S. SOUTHERN COMMAND 2008 POSTURE STATEMENT 14 (2008), available at <http://www.southcom.mil/AppsSC/files/0UI0I1204838891.pdf>; see also 2009 NARCOTICS REPORT, *supra* note 7 (asserting that the U.S. government recognizes the existence of armed conflict).

<sup>28</sup> Sentencia No. C-225/95, 18 May 1995, Corte Constitucional [Constitutional Court] (Colom.), available at <http://www.corteconstitucional.gov.co/relatoria/1995/C-225-95.htm>.

<sup>29</sup> HANSON, *supra* note 20.

Pastrana ordered the area to be taken back from the FARC.<sup>30</sup> The Colombian government has since been able to resume talks with the FARC, although only in relation to prisoner exchanges.<sup>31</sup> Additionally, from 2004 to 2007, eight rounds of negotiations between the government and ELN produced no results.<sup>32</sup>

On this basis, this Article recognizes that there is an armed conflict in Colombia between the government and a variety of armed groups. There are other issues surrounding the conflict in Colombia, including the conflict's international dimension. The United States provides a large amount of military aid, both monetary and otherwise, to the Colombian government. In addition to aid that is earmarked for drug eradication, from 2000 to 2008 the U.S. government gave the Colombian government over \$3.4 billion.<sup>33</sup> Reliable sources have alleged that other states, notably Ecuador and Venezuela, are also funding the guerillas.<sup>34</sup> However, as the conflict itself is limited to the territory of Colombia, this Article will look at the law of non-international armed conflict. Despite other actors' potential involvement in the conflict, the scope of this Article is limited to whether the Colombian government is responsible for IHL abuses.

As this is a domestic armed conflict, AP2 applies.<sup>35</sup> Colombia ratified AP2 on August 14, 1995.<sup>36</sup> Article 1 of the Protocol provides that rebels must hold territory for AP2 to apply.<sup>37</sup> As described above, the government issued the FARC a substantial area within the country in the late 1990s, which the government ordered the army to reclaim when talks broke down. The FARC retained control of the territory until 2002, and by all accounts retains that initial territory today. Current estimates claim that the FARC continues to be active in one-third of the country, mostly in the Southern and Eastern

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<sup>30</sup> *Id.*

<sup>31</sup> *Id.*

<sup>32</sup> *Id.*

<sup>33</sup> U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 6, at 28.

<sup>34</sup> HANSON, *supra* note 20.

<sup>35</sup> Additional Protocol II to the Geneva Conventions of August 12, 1949 and Relating to the Protections of Victims of Non-International Armed Conflicts, art. 1, June 8, 1977, 1123 U.N.T.S. 609, available at <http://www2.ohchr.org/english/law/protocol2.htm> [hereinafter Additional Protocol II] ("This Protocol . . . shall apply to all armed conflicts . . . which take 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.").

<sup>36</sup> See ICRC, *State Parties to the Main Treaties*, at 2, Feb. 22, 2010, available at [http://www.icrc.org/IHL.nsf/\(SPF\)/party\\_main\\_treaties/\\$File/IHL\\_and\\_other\\_related\\_Treaties.pdf](http://www.icrc.org/IHL.nsf/(SPF)/party_main_treaties/$File/IHL_and_other_related_Treaties.pdf).

<sup>37</sup> Additional Protocol II, *supra* note 35, art. 1.

regions.<sup>38</sup> The AUC has traditionally had a strong presence in the Magdalena Region and the North, but it has increased its control and displaced other armed groups since the late 1990s.<sup>39</sup> The International Crisis Group reported that the areas each group controlled changed hands regularly in 2005 as a result of the fighting between them.<sup>40</sup> This Article deals with fumigation from 2000 onwards, and armed groups have clearly had control of territory during that time.

Furthermore, the Colombian Constitutional Court has ruled that under Article 214 of the constitution, the rules of IHL should be respected in all cases.<sup>41</sup> As such, AP2 applies whether or not the conflict has reached such a level of intensity that Article 1 of AP2 applies. Although this ruling is not relevant to Colombia's international obligations, it shows that IHL applies domestically.

### III. IS COCA CULTIVATION LINKED TO THE ARMED CONFLICT?

To place the fumigation of coca crops in the context of IHL, the act of fumigating needs to be sufficiently linked to the armed conflict. In times of war, certain state actions may violate human rights standards or domestic law, but because the violations are not linked to the armed conflict, they cannot be considered IHL violations. IHL protects civilians in times of war. Therefore, to violate IHL, state action must occur in the context of the armed conflict.<sup>42</sup> In 2005, sixty-five of the FARC's 110 operational units were involved in poppy or coca cultivation.<sup>43</sup> Since 1996, the AUC has moved into coca-growing regions, displacing the guerillas there.<sup>44</sup> In 2000, seven AUC blocs existed in coca growing regions.<sup>45</sup> Following partial demobilization by the AUC in 2006, the new groups that formed in the resulting power vacuum engaged in drug trafficking as their primary source of income.<sup>46</sup> In 2003, the

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<sup>38</sup> HANSON, *supra* note 20.

<sup>39</sup> Int'l Crisis Group, *War on Drugs in Colombia*, at 13, Latin America Report 11, Jan. 25, 2005, available at [http://www.crisisgroup.org/library/documents/latin\\_america/11\\_war\\_and\\_drugs\\_in\\_colombia.pdf](http://www.crisisgroup.org/library/documents/latin_america/11_war_and_drugs_in_colombia.pdf).

<sup>40</sup> *Id.* at 8–14.

<sup>41</sup> Sentencia No. C-225/95.

<sup>42</sup> For example, if someone is arrested during wartime for being a member of a rebel army, that person may be guilty of a crime, such as treason, under domestic law. However, because the accused has been arrested in the context of the armed conflict, he or she is entitled to certain protections under IHL above and beyond domestic law. Because it entitles those taking part to certain protections under AP2, it is important to define the fumigations in the context of the armed conflict.

<sup>43</sup> Int'l Crisis Group, *supra* note 39, at 9.

<sup>44</sup> *Id.* at 13.

<sup>45</sup> *Id.*

<sup>46</sup> 2008 HUMAN RIGHTS REPORT, *supra* note 22.

Colombian government claimed that drug trafficking was a threat to peace in Colombia.<sup>47</sup>

There is evidence that many people who grow coca in Colombia do so because of economic need or pressure from guerillas and paramilitary groups who use the coca to generate revenue.<sup>48</sup> Since 2000, the FARC has forced Southern Colombian farmers to plant coca crops, and has provided them with loans on their future harvests.<sup>49</sup> Beginning in 1996, the AUC has reportedly offered individuals more money for coca paste than the FARC.<sup>50</sup> This evidence shows guerrilla and paramilitary groups use revenue from coca cultivation to finance the armed conflict.

#### IV. WHAT IS THE LEGAL FRAMEWORK FOR GROWING COCA IN COLOMBIA?

The Colombian Penal Code prohibits the cultivation of coca plants.<sup>51</sup> There are, however, some exceptions to this prohibition. There is no criminal penalty for owning a plantation of less than twenty plants.<sup>52</sup> In addition, some indigenous communities are entitled to grow coca legally.<sup>53</sup> The 1991 constitution granted indigenous peoples the autonomy to govern their territories according to their customs.<sup>54</sup> This is not an unqualified right permitting the community to do anything it wants; the government is entitled to regulate the cultivation of plants used to make illegal substances according to the use and practices of indigenous cultures.<sup>55</sup> Yet, it has

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<sup>47</sup> Int'l Crisis Group, *Colombia: President Uribe's Democratic Security Policy*, at 3, Latin America Report 6, Nov. 13, 2003, available at [http://www.crisisgroup.org/library/documents/latin\\_america/06\\_colombia\\_\\_uribe\\_dem\\_\\_security.pdf](http://www.crisisgroup.org/library/documents/latin_america/06_colombia__uribe_dem__security.pdf).

<sup>48</sup> WASHINGTON OFFICE ON LATIN AMERICA, CHEMICAL REACTIONS, FUMIGATION: SPREADING COCA AND THREATENING COLOMBIA'S ECOLOGICAL AND CULTURAL DIVERSITY 4 (2008), available at <http://www.wola.org/media/WOLA%20Chemical%20Reactions%20February%202008.pdf> [hereinafter CHEMICAL REACTIONS].

<sup>49</sup> Int'l Crisis Group, *supra* note 39, at 12.

<sup>50</sup> *Id.* at 13.

<sup>51</sup> CÓDIGO PENAL [PENAL CODE] art. 375 (Colom.), available at [http://www.secretariasenado.gov.co/senado/basedoc/ley/2000/ley\\_0599\\_2000\\_pr013.html#375](http://www.secretariasenado.gov.co/senado/basedoc/ley/2000/ley_0599_2000_pr013.html#375).

<sup>52</sup> *Id.*

<sup>53</sup> Some indigenous communities, mainly in Southern Colombia, are entitled to grow coca legally. E-mail from Guillermo Barcenás-Fortín, Legal Affairs Officer, UNODC, to Morgane Landel (Apr. 27, 2009, 12:55PM EST) (on file with author). In the remainder of Part IV of this Article, the laws cited state that indigenous communities have certain rights, distinct from the general population and linked to their particular heritage. See CHEMICAL REACTIONS, *supra* note 48, at 4.

<sup>54</sup> CONSTITUCIÓN POLÍTICA [POLITICAL CONSTITUTION] art. 330 (Colom.), available at [http://www.secretariasenado.gov.co/senado/basedoc/cp/constitucion\\_politica\\_1991\\_pr010.html#330](http://www.secretariasenado.gov.co/senado/basedoc/cp/constitucion_politica_1991_pr010.html#330).

<sup>55</sup> Ley 30 [Law 30], 31 Jan. 1986, art. 7 (Colom.), available at <http://www.alcaldiabogota.gov.co/sisjur/normas/Normal.jsp?i=2774>.

recognized through legislation that it should protect social, cultural, religious, and spiritual practices.<sup>56</sup>

When Colombia ratified the U.N. Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances on June 10, 1994, it included a formal declaration stating that the criminalization of coca cultivation “must be harmonized . . . taking into account the rights of the indigenous communities.”<sup>57</sup> In deciding that the declaration to the Convention was valid under Colombian law, the Constitutional Court stated that Colombia recognizes the difference between the coca leaf and cocaine, and that indigenous communities use the coca leaf in ways that do not have negative effects.<sup>58</sup> The means employed by the government to fight drug trafficking should be sensitive to the cultural identity of the indigenous communities that the constitution protects. In 2003, the Constitutional Court reiterated that indigenous communities had the right to maintain coca plantations because coca is a sacred plant for some indigenous populations; it is important for their livelihood as well as for cultural and medicinal purposes.<sup>59</sup>

The right of indigenous people to cultivate coca on their own land has significant implications for the armed conflict. In 1996, the Inter-American Commission on Human Rights estimated that indigenous communities owned roughly 25 percent of the national territory after the Colombian government gave them legal title to their ancestral lands.<sup>60</sup> In 2005, 710 certified reservations were located in twenty-seven out of thirty-two departments.<sup>61</sup> In terms of fumigations, there are reports that the government is carrying out

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<sup>56</sup> Ley 30 [Law 30], 6 Mar. 1991, art. 5 (Colom.), available at [http://www.dafp.gov.co/leyes/L0021\\_91.HTM](http://www.dafp.gov.co/leyes/L0021_91.HTM).

<sup>57</sup> See United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, Colombia Declaration 2, Dec. 20, 1988, 1582 U.N.T.S. 165, available at [http://treaties.un.org/Pages/ViewDetails.aspx?src=UNTS&tabid=2&mtdsg\\_no=VI-19&chapter=6&lang=en#Participants](http://treaties.un.org/Pages/ViewDetails.aspx?src=UNTS&tabid=2&mtdsg_no=VI-19&chapter=6&lang=en#Participants).

<sup>58</sup> Sentencia No. C-176/94, 12 Apr. 1994, Corte Constitucional [Constitutional Court] (Colom.), available at <http://www.corteconstitucional.gov.co/relatoria/1994/C-176-94.htm>.

<sup>59</sup> Sentencia No. SU-383/03, 15 Mar. 2003, Corte Constitucional [Constitutional Court] (Colom.), available at <http://www.corteconstitucional.gov.co/relatoria/2003/SU383-03.htm>.

<sup>60</sup> Org. of Am. States [OAS], Inter-Am. Commission on Human Rights [ICHR], *Third Report on the Human Rights Situation in Colombia*, ch. X ¶ 17, OEA/Ser.L/V/II.102 (Doc. 9 rev. 1) (Feb. 26, 1999), available at [http://www.asylumlaw.org/docs/colombia/oas99\\_colombia.pdf](http://www.asylumlaw.org/docs/colombia/oas99_colombia.pdf) [hereinafter *Third Report on Human Rights*].

<sup>61</sup> OAS, ICHR, *Annual Report of the Inter-American Commission on Human Rights*, ch. 4 ¶ 54, OEA/Ser.L/V/II.130 (Dec. 27, 2007), available at <https://www.cidh.oas.org/annualrep/2007eng/TOC.htm>.

its program on indigenous lands.<sup>62</sup> In fact, the government openly authorized fumigations of indigenous coca-growing areas in 2007.<sup>63</sup>

Therefore, coca cultivation in Colombia is a complex issue and one that is sometimes linked to wider cultural rights. However, for the most part, it is illegal to grow coca in Colombia.<sup>64</sup> This is relevant because the government should be entitled to take action against an illegal act. However, as this Article argues, a government is not entitled to take arbitrarily harsh action against its citizens' illegal acts; instead, it should take actions that are reasonable and proportionate to the circumstances. This Article further contends that in combating illegal acts linked to the ongoing armed conflict, the Colombian government should abide by the rules of IHL.

#### V. WHAT HAS BEEN THE IMPACT OF FUMIGATIONS?

According to one non-governmental organization ("NGO"), the fumigations began sometime before 1981.<sup>65</sup> In 1984, a group of government experts recommended that the government prepare studies on the impact of fumigations.<sup>66</sup> In 2001, the Ministry of the Environment, Housing, and Land Development finally adopted an environmental management plan to deal with the issues surrounding fumigations.<sup>67</sup> This plan establishes various requirements to ensure environmental and public health protection.<sup>68</sup> However, NGOs allege that the government is not complying with its plan.<sup>69</sup>

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<sup>62</sup> See, e.g., *Third Report on Human Rights*, *supra* note 60, ¶ 52.

<sup>63</sup> Resolución 026/2007 [Resolution 26], 8 Oct. 2007, Consejo Nacional de Estupefacientes [CNE] [National Narcotics Council] (Colom.), available at <http://www.dne.gov.co/?idcategoria=1320>.

<sup>64</sup> See PENAL CODE, *supra* note 51; *supra* Part IV.

<sup>65</sup> TRANSNAT'L INST., TNI BRIEFING SERIES NO. 2001/2, FUMIGATION AND CONFLICT IN COLOMBIA: IN THE HEAT OF THE DEBATE 4 (2001), available at <http://www.tni.org/archives/reports/drugs/debate2.pdf>.

<sup>66</sup> CHEMICAL REACTIONS, *supra* note 48, at 9.

<sup>67</sup> *Id.*

<sup>68</sup> Asociación Interamericana para la Defensa del Ambiente [AIDA], Plan Colombia Spraying-Frequently Asked Questions, [http://www.aida-america.org/aida.php?page=plancolombia\\_brochure#EMP](http://www.aida-america.org/aida.php?page=plancolombia_brochure#EMP) (last visited Sept. 24, 2009) (including various studies, creation of an oversight mechanism, and monitoring processes in terms of the impact of the fumigations) [hereinafter AIDA, FAQs]; see Memorandum from AIDA, Compliance with the Environmental Plan for the Plan Colombia Aerial Herbicide Spraying Program 1 (June 9, 2003), available at [http://www.earthjustice.org/library/references/AIDA\\_memo\\_3-06-10.pdf](http://www.earthjustice.org/library/references/AIDA_memo_3-06-10.pdf).

<sup>69</sup> AIDA, *Estrategias de Desarrollo Alternativo en Colombia: La Necesidad de Acciones Más Allá de las Fumigaciones a Cultivos Ilícitos*, at 6, Aug. 22, 2006, available at [http://www.aida-america.org/templates/aida/uploads/docs/AIDA-INFORME\\_DESARROLLO\\_ALTERNATIVO\\_06-08.pdf](http://www.aida-america.org/templates/aida/uploads/docs/AIDA-INFORME_DESARROLLO_ALTERNATIVO_06-08.pdf) [hereinafter AIDA, *Estrategias*].

Currently, the government fumigates by spraying glyphosate on the coca plants, a commonly-used herbicide.<sup>70</sup> In Colombia it is mixed with other agents,<sup>71</sup> but the government has not released the list of components in this mixture.<sup>72</sup> Therefore, it has been impossible to assess its toxic side effects in a controlled, scientific way.<sup>73</sup> However, information about the effects of glyphosate alone is generally available. The World Health Organization (“WHO”) recommends wearing boots, gloves, and goggles when handling glyphosate.<sup>74</sup> It recommends that anyone on the ground should also wear a face mask and an impermeable hat and “be located well away from the dropping zone” when spraying crops.<sup>75</sup> The WHO also states that glyphosate is poisonous if swallowed and may cause diarrhea, vomiting, and stomach cramps.<sup>76</sup> Any part of the body that comes into contact with the chemical should be washed with clean water immediately because it may irritate the eyes and skin.<sup>77</sup>

The impact of the fumigation programs has been controversial and, as the Article will explain below, there is evidence to both support and contest the negative impact of coca fumigation on human health and the environment.<sup>78</sup> It is difficult to find concrete proof of the fumigations’ impact on the affected population’s health.<sup>79</sup> There is plenty of anecdotal evidence, but no systematic collection of data, to show the impact of glyphosate and the other chemicals

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<sup>70</sup> Human Rights Council, Special Rapporteur on the Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health, *Preliminary Note on the Mission to Ecuador and Colombia, Addendum*, ¶ 3, Doc. A/HRC/7/11/Add.3 (Mar. 4, 2007).

<sup>71</sup> WITNESS FOR PEACE, AN EXERCISE IN FUTILITY: NINE YEARS OF FUMIGATIONS IN COLOMBIA 9–10 (2009), available at [http://witnessforpeace.org/downloads/An\\_Exercise\\_in\\_Futility.pdf](http://witnessforpeace.org/downloads/An_Exercise_in_Futility.pdf).

<sup>72</sup> *Id.*

<sup>73</sup> *Id.*

<sup>74</sup> World Health Org. [WHO], *WHO/FAO Data Sheets on Pesticides No 91 Glyphosate*, Doc. WHO/PCS/DS/96.91 (July 1996), available at [http://www.inchem.org/documents/pds/pds/pest91\\_e.htm](http://www.inchem.org/documents/pds/pds/pest91_e.htm).

<sup>75</sup> *Id.*

<sup>76</sup> *Id.*

<sup>77</sup> *Id.*

<sup>78</sup> OAS, Inter-Am. Drug Abuse Control Commission [CICAD], *Environmental and Human Health Assessment of the Aerial Spray Program for Coca and Poppy Control in Colombia*, at 90 (Mar. 31, 2005) (prepared by Keith Solomon et al.), available at <http://www.cicad.oas.org/en/glifosatefinalreport.pdf> [hereinafter CICAD, *Assessment of Aerial Spray Program*]. The OAS commissioned the main report stating that fumigations do not have a negative impact on health and the environment in 2005. *Id.* at 1. It concluded that the risks to humans from exposure to active agents used in fumigations were minimal. *Id.* at 90. Environmental risks were also low except in relation to aquatic wildlife that was located near the fields being sprayed (and where risks were moderate). *Id.* This study has been criticized for various reasons, including lack of on the ground research. CHEMICAL REACTIONS, *supra* note 48, at 20.

<sup>79</sup> For instance, other issues such as malnutrition, poverty, or lack of adequate healthcare could cause the population’s health problems.

sprayed. The NGOs have gathered evidence that makes it clear that glyphosate has a negative impact on human health and the environment. However, the lack of scientific evidence may make it difficult to build later court cases seeking to remedy the fumigation damage to people and ecosystems.<sup>80</sup>

#### A. *Impact on Health*

In 2003, a Cundinamarca Administrative Court class action ruling ordered the government to stop aerial fumigations in order to carry out further tests in relation to rampant health problems in specific areas.<sup>81</sup> The court found that aerial fumigations were a risk to human health and that exposure could cause cancers and other illnesses, although this had not yet been proven conclusively.<sup>82</sup> The appellate court overturned this decision on the basis that Colombia should be able to defend itself against the guerillas and paramilitaries.<sup>83</sup> The appellate court did not deal with the issues related to health, but instead took the view that the state was entitled to continue its actions because the growth of coca plants was a threat to state security.<sup>84</sup>

A 2005 study claims that glyphosate, even at concentrations lower than those appropriate for agricultural use, is toxic to human placenta cells<sup>85</sup> and could cause reproductive problems.<sup>86</sup> The NGOs have also documented the impact of fumigations on the health of affected people. They allege that the spraying causes illnesses and deaths.<sup>87</sup> Glyphosate causes skin ailments, eye problems,<sup>88</sup> dizziness, vomiting, and diarrhea.<sup>89</sup> In one hospital in the Magdalena region, a staff member indicated that since the fumigations had started, the hospital treats between three and four victims of fumigation-

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<sup>80</sup> For example, in one case, an allegation of death and various illnesses caused by the spraying was not investigated promptly, which makes conclusive results about the impact of fumigations difficult to render. AIDA, *Alternative Development Strategies in Colombia: The Need to Move Beyond Illicit Crop Spraying*, at 1 (Aug. 28, 2006), available at <http://www.earthjustice.org/library/reports/aida-colombia-report-executive-summary-english.pdf>.

<sup>81</sup> Claudia Sampedor Torres v. Ministerio del Ambiente, 01-0022, Tribunal Administrativo de Cundinamarca [Cundinamarca Administrative Tribunal] ¶ 17 (2003) (Colom.).

<sup>82</sup> *Id.*

<sup>83</sup> CHEMICAL REACTIONS, *supra* note 48, at 9.

<sup>84</sup> *See* Torres, 01-0022, Tribunal Administrativo de Cundinamarca ¶ 17.

<sup>85</sup> Sophie Richard et al., *Differential Effects of Glyphosate and Roundup on Human Placental Cells and Aromatase*, 113 ENVTL. HEALTH PERSP. 716, 720 (2005).

<sup>86</sup> *Id.*

<sup>87</sup> AIDA, *Estrategias*, *supra* note 69, at 1.

<sup>88</sup> TRANSNAT'L INST., *supra* note 65, at 4.

<sup>89</sup> PROJECT COUNSELING SERV., COLOMBIA REGIONAL REPORT: MAGDALENA MEDIO 6 (2003).

related illness per day.<sup>90</sup> The government of Ecuador invited the U.N. Special Rapporteur on the Right to Health, Paul Hunt, to report on the impact of the spraying on the Colombian-Ecuadorian Border.<sup>91</sup> Ecuador alleged that because Colombia was spraying within ten kilometers of Ecuador's border, the spray drifting into Ecuador negatively impacted the population and the environment.<sup>92</sup> After his visit, Mr. Hunt stated that there was "credible and reliable evidence that the aerial spraying . . . damages the physical and mental health" of people in Ecuador.<sup>93</sup> The logical conclusion is that if aerial fumigations damage the environment and the health of people in Ecuador, whose land is only incidentally fumigated, then it must also damage the environment and health of those living in Colombia.

### B. *Impact on the Environment*

In the class action described above, the administrative court also found that aerial fumigations have a detrimental effect on the environment and on the ability of Colombians to enjoy their natural environment, a constitutionally-protected right.<sup>94</sup> The court found that the practice negatively impacts the environment by contaminating the soil, air, water, and food sources.<sup>95</sup> The court also determined that fumigation destroys legal crops, fish, and domestic animals, which are the basis of survival for many communities subject to the aerial fumigations.<sup>96</sup> The NGOs have also documented these effects.<sup>97</sup> Additional allegations include indiscriminate spraying of all crops without regard for legal crops, thereby creating problems of food security.<sup>98</sup> In some instances, coca crops survived fumigations while legal crops, including foodstuffs, did not.<sup>99</sup> One NGO also presented evidence that the government fumigated organically-certified farms, resulting in farmers losing their organic certification and, consequently, their source of income.<sup>100</sup>

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<sup>90</sup> *Id.*

<sup>91</sup> Human Rights Council, *supra* note 70, ¶ 3.

<sup>92</sup> *Id.* ¶ 13.

<sup>93</sup> *Id.* ¶ 17.

<sup>94</sup> Torres, 01-0022, Tribunal Administrativo de Cudinarca ¶ 18.

<sup>95</sup> *Id.*

<sup>96</sup> *Id.*

<sup>97</sup> See TRANSNAT'L INST., *supra* note 65.

<sup>98</sup> PROJECT COUNSELING SERV., *supra* note 89, at 5–6.

<sup>99</sup> *Id.* at 4.

<sup>100</sup> WITNESS FOR PEACE, COLOMBIA: WHERE U.S. POLICY KILLS 2, available at [http://www.witnessforpeace.org/downloads/Col\\_Fumigations\\_factsheet.pdf](http://www.witnessforpeace.org/downloads/Col_Fumigations_factsheet.pdf) (last visited Mar. 29, 2010).

Colombia is among the world's most biologically-diverse countries.<sup>101</sup> In addition to damages to the local environment, there are allegations that fumigations damage the wider ecosystem when farmers move their fields deeper into the rainforest to avoid detection—thereby causing further deforestation.<sup>102</sup> From 2000 to 2007, Colombians cut down 158,000 hectares of virgin rain forest to make way for coca plantations.<sup>103</sup> Fumigations have a long-term impact on the soil's productivity<sup>104</sup> and on soil erosion.<sup>105</sup>

#### VI. HAS THE PROGRAM OF AERIAL FUMIGATION BEEN SUCCESSFUL?

Views are mixed as to whether aerial spraying of coca leaves has reduced coca cultivation. As explained above, coca cultivation has increased since 2000.<sup>106</sup> The U.S. government estimates that from 2000 to 2007, coca cultivation increased by 22.6 percent.<sup>107</sup> In addition, UNODC states that cultivation increased between 2006 and 2007 despite substantial anti-drug strategies, including roughly 153,000 hectares of aerial spraying and 67,000 hectares of manual eradication.<sup>108</sup> In addition, between 2006 and 2008, there was a 19 percent increase in the number of farming families that cultivate coca.<sup>109</sup> It is important to bear in mind that there are other factors, aside from eradication, that impact coca production, including price, armed groups, and the country's economy.<sup>110</sup>

Various NGOs have called for an end to fumigations on the basis that they do not work.<sup>111</sup> Farmers can take a number of measures to counter their impact, including washing the sprayed leaves.<sup>112</sup> To a large extent, the viability of the eradication program also depends on alternative crop options

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<sup>101</sup> *U.S. Congress Allows Anti-Narcotics Spraying in Colombian National Parks*, EARTHJUSTICE, Dec. 10, 2003, [http://www.earthjustice.org/news/press/003/us\\_congress\\_allows\\_anti\\_narcotics\\_spraying\\_in\\_colombian\\_national\\_parks.htm](http://www.earthjustice.org/news/press/003/us_congress_allows_anti_narcotics_spraying_in_colombian_national_parks.htm) [hereinafter EARTHJUSTICE].

<sup>102</sup> WITNESS FOR PEACE, *supra* note 71, at 5.

<sup>103</sup> *Al Menos 50 Años Se Necesitan para Recuperar Selva Arrasada por Coca en Colombia [At Least 50 Years Needed to Restore Forest Destroyed by Coca in Colombia]*, ELTIEMPO.COM, Dec. 9, 2008, available at <http://www.eltiempo.com/archivo/documento/CMS-4713597#>.

<sup>104</sup> WITNESS FOR PEACE, *supra* note 71, at 5; see also AIDA, *Estrategias*, *supra* note 69, at 5–6.

<sup>105</sup> Tomás León Sicard, *Eradicación de Cultivos de Uso Ilícito en Parques Nacionales [Eradication of Illicit Crops in National Parks]*, GRUPO SEMILLAS, Jan. 23, 2006, available at <http://www.semillas.org.co/sitio.shtml?apc=w1-1--&x=20154570>.

<sup>106</sup> See discussion, *supra* Part I.

<sup>107</sup> 2009 NARCOTICS REPORT, *supra* note 7.

<sup>108</sup> UNODC, *supra* note 15, at 64.

<sup>109</sup> *Id.* at 59.

<sup>110</sup> *Id.* at 64.

<sup>111</sup> See EARTHJUSTICE, *supra* note 101; see also WITNESS FOR PEACE, *supra* note 71.

<sup>112</sup> CHEMICAL REACTIONS, *supra* note 48, at 14.

available to farmers and how easily they could move their activities into a different area.<sup>113</sup> In some areas, coca leaves can be harvested up to eight times per year.<sup>114</sup> It is therefore not surprising that farmers continue to harvest coca in the absence of an equally lucrative alternative.

The U.S. government says that fumigation deters coca growth, which in turn preserves the environment by reducing deforestation and, consequently, also reducing erosion.<sup>115</sup> The U.S. government also claims that fumigation risks are minimal when considering the alternative: uncontrolled and unplanned clearing of ecologically important land.<sup>116</sup> Critics argue that this assessment fails to recognize the reality that fumigations have not deterred coca cultivation but have merely moved it elsewhere, resulting in increased deforestation to make way for new fields.<sup>117</sup> Coca cultivation was present in twelve of thirty-two provinces in 1999 and is now present in twenty-three provinces.<sup>118</sup>

#### VII. ARE FUMIGATIONS A VIOLATION OF INTERNATIONAL HUMANITARIAN LAW?

When discussing the IHL relevant to aerial fumigations, this Article relies on treaties and rules of customary law as they apply to non-international armed conflict. Part II explained that there is a non-international armed conflict in Colombia. AP2 sets out the law pertaining to non-international armed conflict. AP2 is complemented by rules of customary international law set out by the ICRC in their comprehensive study of the topic.<sup>119</sup> As a result, when looking at Colombia's actions in relation to fumigations, this Article will look at both AP2 and customary international law. In articulating the implications of the relevant IHL concepts, this Article refers to cases pertaining to international armed conflict, and assumes that the definitions of the IHL concepts are the same for both types of conflict.

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<sup>113</sup> UNODC, *supra* note 15, at 102.

<sup>114</sup> Int'l Narcotics Control Board, *2007 Report*, ¶ 447, U.N. Doc. E/INCP/2007/1 (2008), available at <http://www.incb.org/pdf/annual-report/2007/en/annual-report-2007.pdf>.

<sup>115</sup> See *Plan Colombia: Major Successes and New Challenges: Before the H. Comm. on Int'l Relations* (2005) (statement of Jonnathan Farrar, Deputy Assistant Sec'y of State Bureau for Int'l Narcotics and Law Enforcement Affairs), available at <http://ciponline.org/colombia/050511farr.pdf>.

<sup>116</sup> CICAD, *Assessment of Aerial Spray Program*, *supra* note 78, at 91.

<sup>117</sup> CHEMICAL REACTIONS, *supra* note 48, at 22.

<sup>118</sup> WITNESS FOR PEACE, *supra* note 71, at 2.

<sup>119</sup> See MARCO SASSOLI & ANTOINE A. BOUVIER, *HOW DOES LAW PROTECT IN WAR* 730–50 (2d ed. 2006) (laying out the text of *International Humanitarian Law: From Law to Action: Report on the Follow-up to the International Conference for the Protection of War Victims*); *id.* at 364 (explaining ICRC's unique role in interpreting IHL for the world legal community).

The basic premise behind fumigation is that the government should be entitled to fumigate because growing coca is for the most part illegal, even though it is also fumigating indigenous areas where people are legally entitled to grow coca.<sup>120</sup> However, this Article argues that, in fumigating even illegal plantations, Colombia is bound by the rules of IHL.

Under Article 4(1) of AP2, all persons not directly participating in hostilities, or who are no longer participating in hostilities, are entitled to “respect for their person.”<sup>121</sup> Article 4(2) also prohibits acts that involve violence to the health, physical, and mental well-being of the people referred to in Article 4(1).<sup>122</sup>

The first issue is whether or not the farmers cultivating coca are directly participating in hostilities. The law of non-international armed conflict, as set out in AP2, does not distinguish between civilians and combatants.<sup>123</sup> Thus, a person’s actual activities, and not status, should be considered when deciding if the person is directly participating in hostilities.<sup>124</sup> As a result, the government must distinguish between those who participate directly in hostilities from those who do not. This ensures that those not taking part in hostilities are legally protected.<sup>125</sup>

The International Criminal Tribunal for the Former Yugoslavia (“ICTY”) has defined “direct participation in hostilities” as “acts of war which by their nature or purpose are likely to cause actual harm to the personnel or matériel of the enemy armed forces.”<sup>126</sup> Examples of direct participation include attacking the enemy’s army or gathering intelligence. However, according to the ICRC, working as a civilian in an arms factory would not involve direct participation in hostilities.<sup>127</sup>

Presumably, the majority of coca farmers are not fighting in the literal sense of the term. The question remains as to whether they may be considered as directly taking part in hostilities by providing coca leaves to the armed groups, which then finance the armed conflict through the drug trade. Although the cultivation of coca helps finance the armed conflict, it is

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<sup>120</sup> See discussion, *supra* Part IV.

<sup>121</sup> Additional Protocol II, *supra* note 35, art. 4.

<sup>122</sup> *Id.*

<sup>123</sup> *Id.*

<sup>124</sup> SASSOLI & BOUVIER, *supra* note 119, at 258.

<sup>125</sup> *Id.* at 258–59.

<sup>126</sup> Prosecutor v. Stanislav Galić, Case No. IT-98-29-T, ICTY Judgment and Opinion, ¶ 48 (Dec. 5, 2003).

<sup>127</sup> ICRC, *Direct Participation in Hostilities Under International Humanitarian Law*, at 3, June 2, 2003 (prepared by Jean-François Quéguiner), available at [http://www.icrc.co.za/Web/eng/siteeng/0.nsf/htmlall/direct-participation-article-020709/\\$File/2003-02-background-document-icrc.pdf](http://www.icrc.co.za/Web/eng/siteeng/0.nsf/htmlall/direct-participation-article-020709/$File/2003-02-background-document-icrc.pdf).

doubtful that the individuals involved in the cultivation would be considered as direct participators in hostilities. There is no evidence that all coca cultivation finances the armed conflict, or that farmers are members of the armed groups. Farmers who cultivate coca are similar to civilians who work in armament factories. Although their actions help support the war, they are not directly participating in hostilities. Coca cultivation also provides subsistence for the farmers in the same way as vegetable cultivation does. The farmers would not be accused of directly participating in hostilities if they grew corn and then sold it to the armed groups. Yet indirectly, the corn would support the armed groups because it would provide them with a source of food.

As a result, farmers cultivating coca are not directly participating in hostilities and are entitled to respect for their physical and mental health under Article 4 of AP2. The side effects of fumigations, as noted above, can cause injuries and sometimes death. As such, Colombia is failing in its obligation to respect the rights of civilians under Article 4 because it is conducting aerial fumigations that “cause violence to the health and physical and mental well-being” of civilians.<sup>128</sup>

In addition, and by virtue of their status as people not directly participating in hostilities, farmers are protected from military attacks both under Article 13(2) of AP2, which states that attacks may not target civilians unless they directly participate in hostilities,<sup>129</sup> and under rules of customary international law, which obligate parties to distinguish between civilian and military objectives.<sup>130</sup> Armed groups may not even target civilians because of military necessity.<sup>131</sup> The destruction of civilian objects or injury to civilians is only acceptable as “a proportionate side effect of a (lawful) attack directed at a military objective.”<sup>132</sup> As such, civilian objects remain protected “unless and for such time as they are military objectives.”<sup>133</sup>

As stated above, the farmers are not taking part in hostilities directly. The question then becomes whether the coca fields are military objectives. If they are, then they may be attacked subject to the principle of proportionality,<sup>134</sup> discussed below. The first issue is whether the coca fields can ever be military objectives. What constitutes a military objective has

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<sup>128</sup> Additional Protocol II, *supra* note 35, art 4.

<sup>129</sup> Additional Protocol II, *supra* note 35, art. 13; *see also* SASSOLI & BOUVIER, *supra* note 119, at 734 (rule 6 of the ICRC study states the same).

<sup>130</sup> SASSOLI & BOUVIER, *supra* note 119, at 734 (regarding rules 7–10 of the ICRC study).

<sup>131</sup> *Stanislav Galić*, Case No. IT-98-29-T, ¶ 44.

<sup>132</sup> Michael Bothe & Robert F. Turner, *Correspondence*, 90 AM. J. INT'L L. 76, 77 (1996) (Dr. Hans-Peter Gasser responding to criticisms of the Article's authors).

<sup>133</sup> SASSOLI & BOUVIER, *supra* note 119, at 735 (regarding rule 10).

<sup>134</sup> *Id.* at 204.

been subject to debate. Various lawmakers' attempts to draw up lists of military objectives in the last century were never codified in treaty form.<sup>135</sup> Amnesty International argued that, in the context of the war in the Former Republic of Yugoslavia ("FRY"), a radio tower broadcasting propaganda from Belgrade did not constitute a military objective.<sup>136</sup> However, the Office of the Prosecutor of the ICTY took a different view and said that the tower constituted a military objective, because destroying it was part of NATO's campaign to cripple the FRY's governing apparatus.<sup>137</sup>

The ICRC states that there are two criteria defining military objectives: "the nature, location, purpose or use which makes an effective contribution to military action;" and "the total or partial destruction, capture or neutralization which in the circumstances ruling at the time offers a definite military advantage."<sup>138</sup> In light of the ICRC's criteria for defining a military objective, one must first consider the purpose or use of coca fields and the byproducts of those fields—coca leaves. The earlier discussion on whether coca farmers are directly participating in hostilities concludes that most coca fields belong to individual civilians not taking part in hostilities and are not used to further the conflict. Although some byproducts of the fields are used by the armed groups to finance the war, it does not follow that all coca fields are legitimate military objectives. In individual cases it may be that certain fields can be identified as supporting the war effort and are therefore legitimate military objectives.

Before a party to a conflict can bomb civilian objects, it must first find out if there is an enemy presence.<sup>139</sup> If it is not clear on its face that an object is a military objective, it is incumbent upon the side claiming that something is a military objective to show why that particular object meets the criteria. In the context of the war in FRY, some argued that a bridge was a military objective because it was part of a supply route used by Serb forces in

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<sup>135</sup> Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), June 8, 1977, 1125 U.N.T.S. 3, Commentaries ¶¶ 1997–99, available at <http://www.ICRC.org/ihl.nsf/COM/470-750067?OpenDocument> [hereinafter ICRC Commentaries to Protocol I].

<sup>136</sup> Amnesty Int'l, *NATO/Federal Republic of Yugoslavia: "Collateral Damage" or Unlawful Killings?*, at 43–45, AI Index 70/18/00, June 5, 2000, available at <http://www.amnesty.org/en/library/asset/EUR70/018/2000/en/e7037dbb-df56-11dd-89a6-e712e728ac9e/eur700182000en.pdf> [hereinafter Amnesty Int'l, *NATO*] (dealing with the 1999 NATO bombing of the Belgrade radio tower in the war in FRY).

<sup>137</sup> Int'l Criminal Tribunal for the Former Yugoslavia [ICTY], *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia*, ¶ 78 (June 13, 2000), preprinted in 39 I.L.M. 1257 (2000), available at <http://www.icty.org/x/file/Press/nato061300.pdf>.

<sup>138</sup> ICRC Commentaries to Protocol I, *supra* note 135, ¶ 2018.

<sup>139</sup> Saby Ghoshray, *When Does Collateral Damage Rise to the Level of a War Crime? Expanding the Adequacy of Laws of War Against Contemporary Human Rights Discourse*, 41 CREIGHTON L. REV. 679, 691 (2008).

Kosovo.<sup>140</sup> Although it was a civilian object, it became a military objective because of its purpose during the war.

There is no evidence that the Colombian government is making any attempts to find out which fields are being used by armed groups in order to show that the coca fields it targets for fumigation are military objectives. In fact, the government failed to consult with indigenous populations about fumigations, which is a violation of domestic law.<sup>141</sup> The Constitutional Court, recognizing this failure in 2003, ordered the government to consult effectively and efficiently with indigenous populations about coca eradication.<sup>142</sup> By its failure to consult them and determine if the fields are linked to the armed conflict, Colombia is failing in its obligations to distinguish between military and civilian objectives. Before spraying areas, the government should, at the very least, attempt to make inquiries about the fields and assess whether they belong to the armed groups or to civilians.

The second consideration in the ICRC's definition of a military objective is whether destruction of the fields creates a definite military advantage.<sup>143</sup> The ICRC defines military objective in terms of the anticipated results—something is not a legitimate military objective if its destruction will only bring “potential or indeterminate advantages.”<sup>144</sup> Furthermore, the Nuremberg trials held that for a target to be a military objective “[t]here must be some reasonable connection between the destruction of property and the overcoming of the enemy forces.”<sup>145</sup>

The military advantage of fumigations is disputed and not quantifiable. The U.S. Army estimates that FARC membership has decreased from 17,500 in 2002 to 9000 people in 2008.<sup>146</sup> As stated above, this is disputed by the commander of the FARC.<sup>147</sup> Additionally, the U.S. Army states that the Colombian government cleared out numerous FARC-held areas and brought former members to justice.<sup>148</sup> Homicides, kidnappings, and terror attacks on

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<sup>140</sup> See ICTY, *supra* note 137, ¶ 58 (describing the military strike on the bridge, explaining its military role and the mistaken attack on a civilian train that crossed the bridge as it was demolished).

<sup>141</sup> AIDA, *Estrategias*, *supra* note 69, at 7.

<sup>142</sup> Sentencia No. SU.383/03, 13 May 2003, Corte Constitucional [Constitutional Court] (Colom.), available at <http://www.corteconstitucional.gov.co/relatoria/2003/SU383-03.htm>.

<sup>143</sup> ICRC Commentaries to Protocol I, *supra* note 135, ¶ 2018.

<sup>144</sup> *Id.* ¶ 2024.

<sup>145</sup> United States of America v. Wilhelm List, et al. (Case No. 7), in 11 TRIALS OF WAR CRIMINALS BEFORE THE NUREMBERG MILITARY TRIBUNALS UNDER CONTROL COUNCIL LAW, No. 10 759, 1253–54 (1950).

<sup>146</sup> STAVRIDIS, *supra* note 27, at 15.

<sup>147</sup> Interview by Garry Leech with Raul Reyes, *supra* note 18.

<sup>148</sup> STAVRIDIS, *supra* note 27, at 15.

civilians have decreased “due in large part to the current Colombian Administration’s strategy of establishing security and governance throughout its sovereign territory.”<sup>149</sup> Even if the FARC decreased in power, Colombia continues to be plagued by an armed conflict; despite the demobilization of paramilitaries and guerillas, new armed groups emerged.<sup>150</sup> If the government is succeeding in its war against the armed groups, there is still no indication that this is due to aerial fumigations. Coca production has increased since the beginning of Plan Colombia,<sup>151</sup> and there is no concrete evidence that any military advantages resulting from the plan were linked to aerial fumigation. The increase in coca cultivation should also be a clear sign to the government that it cannot justify its policy of fumigation on the basis of military advantage, because the cause of any advantage is indeterminate. There is no way of linking any decrease in military activity to the fumigations. As a result, not all coca fields are military objectives. By fumigating indiscriminately, Colombia violates Article 13(2) of AP2 and rules of customary international law.

However, the government may still successfully argue that coca fields are “dual use” objects, or civilian objects that become military objectives because of their secondary military use,<sup>152</sup> such as a bridge used to supply the armed forces. An attack on a dual-use object may still violate IHL if it violates the principle of proportionality.<sup>153</sup> In deciding if an attack is proportional, the “basic obligation is to spare civilians and civilian objects as much as possible.”<sup>154</sup> Rule 14 of the ICRC customary rules of IHL prohibits an attack that is expected to cause injury to civilians, or damage to civilian objects if the injury or damage would be excessive “in relation to the concrete and direct military advantage anticipated.”<sup>155</sup> For instance, some argue that the bombing of the radio station in Belgrade by NATO forces was not proportional because it only had the effect of disturbing transmission for three hours, and because NATO forces knew that they would be unlikely to disturb information flow for much longer.<sup>156</sup> Where the military advantage is

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<sup>149</sup> *Id.*

<sup>150</sup> See ICRC ANNUAL REPORT, *supra* note 24.

<sup>151</sup> See discussion, *supra* Part I.

<sup>152</sup> See James A. Burger, *International Humanitarian Law and the Kosovo Crisis: Lessons Learned or to Be Learned*, 839 INT’L REV. RED CROSS 129, 129–45 (2000), available at <http://www.icrc.org/web/eng/siteeng0.nsf/html/57JQCS>.

<sup>153</sup> ICRC, *International Humanitarian Law and the Challenges of Contemporary Armed Conflict*, at 11, Report 03/IC/09, Dec. 2–6, 2003, available at [http://www.icrc.org/Web/eng/siteeng0.nsf/htmlall/5XRDCC/\\$File/IHLcontemp\\_armedconflicts\\_FINAL\\_ANG.pdf](http://www.icrc.org/Web/eng/siteeng0.nsf/htmlall/5XRDCC/$File/IHLcontemp_armedconflicts_FINAL_ANG.pdf) [hereinafter ICRC, *International Humanitarian Law*].

<sup>154</sup> *Stanislav Galić*, Case No. IT-98-29-T, ¶ 58.

<sup>155</sup> SASSOLI & BOUVIER, *supra* note 119, at 735.

<sup>156</sup> Amnesty Int’l, *Colombia*, *supra* note 2, at 43–44.

unknown, “the interests of the civilian population should prevail.”<sup>157</sup> A “military advantage” in this sense means “gaining ground or destroying or weakening the enemy’s armed forces.”<sup>158</sup> In addition, Rule 14 also states that “military means employed must be balanced against the overall strategic end.”<sup>159</sup> The civilian population would be better served by an end to the fumigations. Yet, the government continues its policy despite the fact that it is not reaping a clear military advantage. The government’s failure to recognize that this policy has not provided the desired effects of either eradicating coca cultivation or ending the armed conflict, and its consequent failure to stop the policy, is a continuing violation of the principle of proportionality.

Rules 11 through 13 of the ICRC handbook on customary international law address indiscriminate attacks on civilians and prohibit attacks that cannot be directed specifically at a military objective.<sup>160</sup> This is linked to the discussion earlier in this Part, dealing with the distinction between civilian and non-civilian objects. For example, the Secretary of Education in the Putumayo province stated that between November 2006 and June 2007, fifty-nine schools had been the subjects of indiscriminate fumigations.<sup>161</sup> By December 2008, 8570 complaints had been filed against the government alleging damage to legal crops.<sup>162</sup> Even if coca fields are deemed to be military objectives, aerial fumigations violate the rule against indiscriminate attacks because of evidence that air attacks are not aimed accurately enough at coca fields.

Colombia has also violated the principle of precaution, detailed in Rules 15 through 20 of the ICRC’s handbook of customary international law.<sup>163</sup> Colombia breaches Rule 19 by failing to stop an attack when it becomes apparent that resulting damage and injury exceeds the expected “concrete and direct military advantage anticipated.”<sup>164</sup> This requires a similar analysis to what is discussed above. It is clear that the government is not gaining the stated military advantage of ridding Colombia of armed groups by fumigating coca fields. Therefore, the Colombian government is in violation of the principle of precaution, because it continues to cause injury to civilians via fumigation without gaining a military advantage.

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<sup>157</sup> STAVRIDIS, *supra* note 27, at 12.

<sup>158</sup> ICRC, *International Humanitarian Law*, *supra* note 153, at 12.

<sup>159</sup> Mark Caggiano, *The Legitimacy of Environmental Destruction in Modern Warfare: Customary Substance over Conventional Form*, 20 B.C. ENVTL. AFF. L. REV. 479, 494 (1993).

<sup>160</sup> SASSOLI & BOUVIER, *supra* note 119, at 735.

<sup>161</sup> WITNESS FOR PEACE, *supra* note 71, at 6.

<sup>162</sup> See 2009 NARCOTICS REPORT, *supra* note 7.

<sup>163</sup> SASSOLI & BOUVIER, *supra* note 119, at 735–36.

<sup>164</sup> *Id.* at 736.

In addition, this obligation includes a duty to verify that the targets are not civilian and to choose a method of combat that would ensure the least possible injury to civilians.<sup>165</sup> As explained in Part V, the Colombian courts ordered the government to stop fumigations and there has been evidence of injury, damage, and death of civilians caused by fumigations. Yet, Colombia has continued to pursue this method of eradication, even when the military advantage of this strategy is not clear. By continuing with this policy, the government has not complied with its duty to verify if the target is civilian.

Rule 43 of the ICRC customary rules states that the general principles on the conduct of hostilities apply to the natural environment.<sup>166</sup> This means that attacks are only allowed on military objectives and that destruction of the natural environment is prohibited unless legitimate military imperatives apply.<sup>167</sup> “Launching an attack against a military objective which may be expected to cause incidental damage to the environment which would be excessive in relation to the concrete and direct military advantage anticipated is prohibited.”<sup>168</sup> The same proportionality considerations apply as the ones set out above, and the same analysis can be made. Even if the fields can be defined as military objectives, it is doubtful that a military imperative requires their destruction. The fumigations’ incidental damage to the environment, such as the contamination of water sources or the displacement of coca fields to areas that are then deforested is excessive when weighed against questionable military advantage. For these reasons, Colombia continues to violate Rule 43.

Rule 76 of the ICRC’s customary international law prohibits the use of herbicides in certain circumstances. Rule 76(d) and (e) may apply in this case. Rule 76(d) says that “the use of herbicides as a method of warfare is prohibited if they . . . would cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which may be expected to be excessive in relation to the concrete and direct military advantage anticipated[.]”<sup>169</sup> This Article has presented clear evidence that the aerial fumigation program has caused injury to civilian life, damage to property, and has brought no clear military advantage. The government has ignored this evidence and continued its program.

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<sup>165</sup> U.N. Int’l Comm’n of Inquiry on Darfur, *Report to the United Nations Secretary-General*, ¶ 259, delivered to the Secretary-General, U.N. Doc. 5/2005/60 (Jan. 25, 2005), available at [http://www.un.org/News/dh/sudan/com\\_inq\\_darfur.pdf](http://www.un.org/News/dh/sudan/com_inq_darfur.pdf) (laying out the international law obligations from the Hague Regulations of 1907).

<sup>166</sup> SASSOLI & BOUVIER, *supra* note 119, at 738.

<sup>167</sup> *Id.*

<sup>168</sup> *Id.*

<sup>169</sup> *Id.* at 741.

Rule 76(e) prohibits the use of herbicides if it would have the effect of causing “widespread, long-term and severe damage to the natural environment.”<sup>170</sup> One of the criticisms of this rule is that the threshold of how damage is defined is too high to ever prove a violation occurred in practice.<sup>171</sup> Scholars interpret this rule, in connection with Additional Protocol 1 to the Geneva Convention, to require all three types of damage at the same time.<sup>172</sup> Although some evidence exists of long-term damage to the environment, it is doubtful that Colombia is in violation of this rule. While evidence shows that the fumigations have contributed to partial deforestation of the Amazon, it is unclear whether the deforestation would have occurred without fumigations, as local farmers rely on coca crops to live.<sup>173</sup> It may be that the fumigations exacerbate the problem and that, in light of the fact that they do not work as intended, the government should stop fumigating, pending an environmental impact assessment.

#### VIII. CONCLUSION

Through its aggressive aerial fumigation program, Colombia violates various rules and treaty provisions relating to IHL. Particularly in relation to the impact of fumigations on human health, Colombia violates its obligations under Articles 4 and 13 of AP2 and Rules 7–10 of the ICRC customary international law handbook. It also violates principles against indiscriminate attacks and the principle of precaution.

In relation to the environment, Colombia violates the ICRC’s Rules 43 and 76(d). The argument is more difficult to make in relation to the environment because, by all accounts, coca cultivation causes deforestation and already has a negative impact on the environment. What does seem clear, however, is that fumigations are exacerbating this problem.

One apparent problem, highlighted by this Article, is that there has not been a complete assessment of the impact of fumigations, and evidence of the negative impact of fumigations is often anecdotal. This will make it difficult to prove that the fumigations have been the cause of the problems discussed in this Article. If a case of this nature ever came before a tribunal, it would require medical and scientific evidence to establish a causal link between the fumigations and the negative consequences discussed above. In short, these issues pose different problems than allegations of war crimes because they not only require evidence from the victim, but also scientific evidence that the

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<sup>170</sup> *Id.*

<sup>171</sup> Betsey Baker, *Legal Protections for the Environment in Times of Armed Conflict*, 33 VA. J. INT’L. L. 351, 368 (1993).

<sup>172</sup> Jozef Goldblat, *The Mitigation of Environmental Disruption by War: Legal Approaches*, in ENVIRONMENTAL HAZARDS OF WAR: RELEASING DANGEROUS FORCES IN AN INDUSTRIALIZED WORLD 48, 52 (Arthur Westing ed., 1990).

<sup>173</sup> See discussion, *supra* Part V.

fumigations in fact caused the injuries and environmental damage discussed above.