

Chapter 7

Are the Targets of Aerial Spraying Operations in Colombia Lawful Under International Humanitarian Law?



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Abstract Since the beginning of the program of aerial spraying of illicit crops with a glyphosate-based chemical mixture in Colombia, local farmers and peasants have claimed that it affects their health, environment, and economy. As a result, the legality of this program has been analyzed from an International Human Rights Law (IHRL) perspective. Nevertheless, when it takes place in situations of armed conflict, it is also regulated by International Humanitarian Law (IHL). After finding that some aerial spraying operations conducted in Colombia amount to “attacks” under IHL, the chapter looks into the alleged protected status of both illicit crops and the farmers who grow them for organized armed groups fighting the Colombian government. The chapter concludes that, unless they lose their protected status, they are unlawful targets for the Colombian government. As a consequence, and without prejudice to the findings of a legality analysis of the aerial spraying program in Colombia from an IHRL perspective, if the Colombian government decides to restart the program, it will have to design its aerial spraying operations so as to make sure that they do not amount to attacks under IHL.

Keywords Aerial spraying of illicit crops • Glyphosate • Attack • Military objective • Protected objects • Protected persons • Continuous combat function • Direct participation in hostilities • Colombia

7.1 Introduction

Glyphosate is a herbicide usually applied to the leaves of plants to kill broadleaf plants and grasses.¹ Since the early 1980s, a program of aerial spraying of illicit crops (especially coca crops) with a glyphosate-based chemical mixture (hereinafter

¹ Glyphosate has been described as “[...] a weak organic acid consisting of a glycine and a phosphonomethyl moiety. The empirical formula is C₃H₈NO₅P. Glyphosate is usually formulated as a salt of the deprotonated acid of glyphosate and a cation, e.g., isopropylamine or trimethylsulfonium. The purity of technical grade glyphosate is generally above 90%. Technical grade glyphosate is an odourless white crystalline powder with a specific gravity of 1.704, a very low vapour pressure, and a high solubility in water. The octanol-water partition coefficient (log K_{ow}) is

“glyphosate”) was set into motion in Colombia. Since then, many warnings have been given inside and outside Colombia—including by the United States (US) Congress—about the likely adverse effects of glyphosate on the environment and the people living in the vicinity of areas where aerial spraying had been carried out until 2015.²

Despite the Colombian government’s decision to suspend all aerial spraying with glyphosate in 2015,³ critics of the suspension repeatedly requested the resumption of the aerial spraying program in 2016.⁴ To support their position, these critics initially looked to the report issued on July 8, 2016, by the United Nations (UN) Office on Drugs and Crime, which found a 40 percent increase in coca crops in Colombia between 2014 and 2015.⁵

Although the findings of this report referred to a period before the implementation of the suspension, the requests for the resumption of the aerial spraying program have persisted during 2017 and 2018. Critics have found support in the March 14, 2017 report of the US Executive Office of National Drug and Control Policy, according to which coca cultivation increased to a record high in Colombia in 2016.⁶ Based on this report, the Trump Administration has increased pressure on the Colombian government to resume the aerial spraying program, as shown by the remarks made by US Secretary of State at the House Foreign Affairs Committee on June 13, 2017.⁷ This chapter is therefore written in a context of increasing internal and external pressure on the Colombian government to restart the aerial spraying program.

–2.8. Glyphosate is amphoteric and may exist as different ionic species, dependent on the actual pH”. See World Health Organization 1994.

² Aerial spraying of illegal crops with herbicides is not a new issue. Such practices have been conducted since Richard Nixon’s famous declaration of the war on drugs on 18 June 1971. The first aerial spraying of illicit crops in the Americas took place in Mexico, where approximately 936 poppy fields and 4500 marijuana fields were fumigated between 1971 and 1972. In 1978, aerial spraying of illicit crops took place in the area of the *Sierra Nevada de Santa Marta*. At that time, the herbicide *paraquat* was used. Del Olmo 1990, p 26; Colombian Ombudsman 2002.

³ Colombian Drugs Observatory (2015) Paso histórico hacia una nueva política de drogas: se suspende la aspersión con glisofato [Historic step towards a new drug policy: aerial spraying operations with glyphosate are suspended]. <http://www.odc.gov.co/INICIO/Noticias/ArtMID/2976/ArticleID/1167/Paso-hist243rico-hacia-una-nueva-pol237tica-de-drogas-se-suspende-la-aspersi243n-con-glisofato>. Accessed 25 February 2018.

⁴ RCN Radio (2016) ¿Se volverá a fumigar con glisofato? [Will aerial spraying operations with glyphosate be resumed?] <http://www.rcnradio.com/nacional/se-volvera-a-fumigar-con-glisofato/>. Accessed 25 February 2018.

⁵ UN Office on Drugs and Crime 2017.

⁶ United States Executive Office of National Drug Control Policy 2017.

⁷ United States Secretary of State 2017. See also Isacson A (2017) Colombia and Drugs: Rex Tillerson’s “Coca Confusion”. The Crime Report: Criminal Justice Network. <https://thecrimereport.org/2017/06/27/colombia-and-drugs-washingtons-coca-confusion/>. Accessed 5 May 2018.

Most authors who have analyzed the program of aerial spraying of illicit crops with glyphosate in Colombia, including Pauker,⁸ Rutledge,⁹ Wilhite,¹⁰ and Esposito,¹¹ consider it a law enforcement program regulated by International Human Rights Law (IHRL). The same conclusion has been reached by the US Senate Committee on Appropriations, which has highlighted the key role of the police in implementing it.¹²

Nevertheless, Knudsen¹³ and Landel¹⁴ have recently challenged this conclusion in light of the Colombian government's May 2011 acknowledgement of the existence of a non-international armed conflict (NIAC) in Colombia¹⁵ and the close links between illicit drug production and the armed conflict in Colombia. Strong evidence indicates that both guerrilla movements (e.g. the National Liberation Army (ELN) and, until recently, the Colombian Revolutionary Armed Forces (FARC))¹⁶ and paramilitary groups have used income from drug-trafficking, particularly cocaine, to finance their military efforts in the NIAC in Colombia.¹⁷

As a result, for Knudsen and Landel, the aerial spraying program in Colombia is also regulated by International Humanitarian Law (IHL) and, therefore, an IHL approach to the program should also be taken into consideration by the Colombian government in deciding whether to restart the program.

This does not mean that IHRL is not applicable to the program.¹⁸ On the contrary, these two branches of International Law are jointly applicable¹⁹ because the traditional view of IHL as *lex specialis* vis-à-vis IHRL in armed conflicts has been overcome.²⁰ Additionally, International Criminal Law (ICL) may also be

⁸ Pauker 2003, p 661.

⁹ Rutledge 2011, p 1079.

¹⁰ Wilhite 2006, p 42.

¹¹ Esposito 2010, p 2.

¹² United States Senate Committee on Appropriations 2003. See also Pauker 2003, pp 669–671.

¹³ Knudsen 2012–2013, p 55.

¹⁴ Landel 2010, pp 491–513.

¹⁵ El Espectador (2011) Santos reconoce el conflicto armado y Uribe lo controvierte [Santos recognizes the armed conflict and Uribe disputes it]. <http://www.elespectador.com/noticias/politica/santos-reconoce-conflicto-armado-y-uribe-controvierte-articulo-267421>. Accessed 25 February 2018; see also Semana (2011) ¿Qué significa el reconocimiento del conflicto por parte del gobierno? [What does the recognition of the conflict by the government mean?] <http://www.semana.com/nacion/articulo/que-significa-reconocimiento-del-conflicto-armado-parte-del-gobierno/239313-3>. Accessed 25 February 2018.

¹⁶ Colombian Government and FARC 2016.

¹⁷ Washington Office on Latin America 2008, p 4; International Crisis Group 2005, pp 9, 12.

¹⁸ Knudsen 2012–2013, p 55; Landel 2010, pp 491–513.

¹⁹ ICJ, *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, Advisory Opinion, 9 July 2004, [2004] ICJ Rep 131 (*Palestinian Wall case*), paras 106–113; ICJ, *Legality of the Threat or Use of Nuclear Weapons*, Advisory opinion, 8 July 1996, [1996] ICJ Rep 131 (*Nuclear Weapons case*), para 25; Doswald-Beck and Vité 1993, p 94; Vinuesa 1998, pp 69–110.

²⁰ Jinks 2014, pp 662–674.

applicable, as serious IHL and IHRL violations constitute war crimes and crimes against humanity applicable at all times during an armed conflict.²¹ Thus, the principle of individual criminal responsibility is a corollary to the joint application of IHL and IHRL in armed conflicts.²²

The legality analysis under IHL of the aerial spraying program in Colombia has exclusively focused so far on whether the glyphosate-based chemical mixture poured into Colombian illicit crops violates the prohibition against the use of chemical and biological weapons. Concerning this issue, Knudsen has argued that aerial spraying with glyphosate is a type of weaponry that violates the prohibition against the use of chemical and biological weapons.²³ Landel has rejected this view because, for her, the studies of the toxic effects of the glyphosate-based chemical mixture poured into Colombian illicit crops lack the comprehensive and systematic nature that is needed to state, with a high degree of certainty, that such mixture violates the prohibition against the use of chemical and biological weapons.²⁴ The 2015 report of the International Agency for Research on Cancer (IARC) of the World Health Organization (WHO), in which glyphosate was found to be a likely cause of cancer,²⁵ and the recent rulings of the Colombian Constitutional Court²⁶ and the Colombian State Council²⁷ applying the precautionary principle show the need to conduct the necessary scientific studies to provide a definitive answer to this question.

In the absence of the said scientific studies, the present chapter focuses on two other issues of the IHL analysis of the aerial spraying program in Colombia, which have not received sufficient attention so far: (i) whether, on the basis of a case-by-case analysis, some of the aerial spraying operations could be considered “attacks” under IHL; and, if the answer is in the affirmative, (ii) whether the targets of such operations, that is, the illicit crops and the farmers who grow them for some of the parties to the NIAC in Colombia, could be considered lawful targets under

²¹ Doswald-Beck and Vité 1993, p 94; Vinuesa 1998, pp 69–110.

²² The application of ICL may take place through international criminal tribunals (direct enforcement mechanism) or national courts (indirect enforcement mechanism). See Rome Statute of the International Criminal Court, opened for signature 17 July 1998, 2187 UNTS 90 (entered into force 1 July 2002), Article 8; UN Security Council (1993) Resolution 827 (1993): Statute of the International Criminal Tribunal for the Former Yugoslavia, UN Doc. S/RES/827 (ICTY Statute), Articles 2, 3; UN Security Council (1994) Resolution 955 (1994): Statute of the International Criminal Tribunal for Rwanda, UN Doc. S/Res/955 (ICTR Statute), Article 4.

²³ Knudsen 2012–2013, pp 55 et seq.

²⁴ Landel 2010, pp 500–501.

²⁵ International Agency for Research on Cancer of the World Health Organization 2015.

²⁶ Colombian Constitutional Court, Auto 073, 27 March 2014, A-073-18 (*A-073-18 case*), para 118; Judgment T-080/17, 7 February 2017 (*T-080/17 case*), paras 7.14–7.15; Judgment T-736/17, 21 April 2017 (*T-736/17 case*), paras 4.7, 5.4.

²⁷ Colombian State Council, Judgment, 13 December 13, 2013, Process Number: 11001 0324 000 2004 00227 01 (*Glyphosate case*), pp 41, 42, 50.

IHL. Before addressing these two issues in Sects. 7.3 and 7.4 of the chapter, Sect. 7.2 reviews the historical development of the program of aerial spraying of illicit crops with glyphosate in Colombia.

7.2 Historical Development of the Program of Aerial Spraying of Illicit Crops with Glyphosate in Colombia

The historical development of the program of aerial spraying of illicit crops with glyphosate in Colombia reveals that from the very beginning there was legal and scientific resistance to the program at the local level. Indeed, as early as in April 1984, a report issued by the Committee of Experts on Herbicides of the Colombian National Health Institute discouraged the widespread use of glyphosate or other herbicides by aerial application and recommended the use of other mechanisms of eradication of illicit crops.²⁸

In light of this report, the 1988 program of eradication of illicit crops with glyphosate in the Department of Cauca did not contemplate aerial spraying by fixed-wing aircrafts. As stressed by the Colombian Ombudsman, this method of eradicating illicit crops was ruled out because of: (i) environmental impacts; (ii) significant damage caused to fields located near the areas under aerial spraying; (iii) high pollution generated in water sources; and (iv) increased risk of impairment for human beings and wildlife.²⁹

The situation changed in the late 1990s, when international pressure led to resuming the aerial spraying program. As a result, numerous allegations were made concerning the severe damage caused to the fertility of the land by aerial spraying, affecting in particular vulnerable populations such as children, peasants and indigenous people with a system of collective ownership.³⁰ The Colombian Ombudsperson highlighted in 2002 that, due to aerial spraying with glyphosate of 100 000 to 150 000 hectares per year since 1998, the Colombian ecosystem, which is the second richest in the world in bio-diversity, was being seriously damaged, and that tens of thousands of peasants were being displaced.³¹ Despite these allegations, the Colombian government did not request scientific studies to be carried out on the effects of glyphosate.³²

During the period 1998–2002, the plight of forced displacement in Colombia increased substantially due to the lack of alternative economic programs for those farmers whose only means of survival were illicit crops.³³ The same was true for

²⁸ Committee of Experts on Herbicides of the Colombian National Health Institute 1986.

²⁹ Colombian Ombudsman 2002, p 9.

³⁰ *Ibid.*, p 11. See also Youngers and Rosin 2004, p 118.

³¹ Colombian Ombudsman 2002, p 11; see also Zarate-Laun 2001.

³² Colombian Ombudsman 2002, p 11.

³³ *Ibid.*

those farmers whose lawful crops were sprayed unintentionally, as a result of the flexible standards under which aerial spraying took place.³⁴ The situation was such that, at the end of 2002, the US Congress conditioned the financial aid to Colombia on the fulfillment of the following conditions to the program of aerial spraying of illicit crops: (i) compliance with the regulatory controls required by the US Environmental Protection Agency (EPA); (ii) agreement with the Colombian government to ensure that aerial spraying was carried out in compliance with Colombian law; (iii) avoidance of unreasonable risks or adverse effects on people or the environment; (iv) implementation of fair procedures to evaluate the complaints of Colombian citizens for damage to their health or licit crops; and (v) implementation of alternative economic projects for the affected communities.³⁵ Moreover, the US Congress imposed a duty on the US State Department to submit an annual report on the level of compliance with these conditions.³⁶

After the first US State Department report, the US Senate Committee on Appropriations issued a statement in 2003 that expressed concern because (i) aerial spraying was taking place only 100 m away from residential areas (this practice departed significantly from the way aerial spraying with glyphosate was carried out in the US);³⁷ (ii) aerial spraying on farmers seemed to be generating a number of public health problems, including vomiting, diarrhea, eye problems, skin cancer and even death; (iii) the procedure for handling complaints in Colombia did not enjoy the most basic procedural safeguards;³⁸ and (iv) no alternative economic programme to coca production had been implemented by the Colombian government.³⁹ The US Senate Committee on Appropriations also stressed the need to conduct further scientific studies to: (i) ensure that the program did not pose unreasonable risks or adverse effects on human beings or the environment; and (ii) show the existence of appropriate mechanisms for monitoring and, where appropriate, ensuring the proper use of glyphosate.⁴⁰

Ten years later, on 13 March 2013, the Colombian State Council banned the aerial spraying of illicit crops with glyphosate in national parks. It did so in light of the persistent uncertainty about its potential damaging effects.⁴¹ In its March 27,

³⁴ Ibid.

³⁵ United States Congress 2002.

³⁶ Ibid.

³⁷ United States Senate Committee on Appropriations 2003, pp 173–174.

³⁸ Among the thousands of complaints filed between 2003 and 2004, only one had been accepted by the Colombian authorities.

³⁹ United States Senate Committee on Appropriations 2003, pp 173–174.

⁴⁰ Pauker 2003, pp 669–671.

⁴¹ *Glyphosate case*, above n 27, pp 41–42, 50. The Colombian State Council came to this conclusion after finding that the views given by the Colombian Agricultural Institute and the Colombian Ministry of Social Protection were notably at odds with the views of the Colombian Ombudsman and the Special Administrative Unit for the National Parks System. For the former, the effects of glyphosate on wildlife were either unknown or slightly toxic at best. For the latter, several studies had showed that the use of glyphosate significantly disrupted both the environment

2014 decision, the Colombian Constitutional Court ordered the Ministries of Environment and Sustainable Development and of Health and Social Protection to conduct all necessary technical and scientific studies to determine the impact of the program of aerial spraying on the health of members of black communities and the environment in the Department of Nariño. The Colombian Constitutional Court also ordered that, if the reports were inconclusive on the absence of a current, serious and irreversible risk to the health of the people and/or the environment, the precautionary principle should be applied and the program of aerial spraying should be immediately suspended.⁴²

On 20 March 2015, the International Agency for Research on Cancer (IARC) of the WHO stressed that glyphosate could likely cause cancer. It also highlighted the need for (i) further scientific studies to be conducted to provide a definitive answer to this question; and (ii) the suspension in the meanwhile of all aerial spraying of illicit crops with glyphosate.⁴³ In light of this report, the Colombian government decided on 15 May 2015⁴⁴ to suspend by 1 October 2015 all aerial spraying.⁴⁵

Since then, as discussed in the introductory section of this article, the Trump Administration and critics of the suspension have repeatedly requested the resumption of the aerial spraying program, increasing internal and external pressure on the Colombian government to restart it.⁴⁶ Meanwhile, the Colombian Constitutional Court on 7 February 2017 and 21 April 2017 issued two new judgments on this issue. In the first judgment, it applied the precautionary principle to ban any use of the program of aerial spraying of illicit crops with glyphosate given the likelihood of causing cancer.⁴⁷ In the second judgment, the Colombian Constitutional Court adopted a more flexible approach by highlighting that any

and human health, putting at risk special protection areas, such as national parks, and the welfare of the nearby populations. Furthermore, in deciding whether there was a less restrictive measure than aerial spraying with glyphosate to achieve similar effects (e.g., manual eradication of illicit crops), the Colombian State Council acknowledged that there was not yet sufficient objective evidence to enable a comparison between the consequences in the application of both types of measures.

⁴² *A-073-18* case, above n 26, p 118.

⁴³ International Agency for Research on Cancer of the World Health Organization 2015.

⁴⁴ Colombian Drugs Observatory (2015) Paso histórico hacia una nueva política de drogas: se suspende la aspersión con glifosato [Historic step towards a new drug policy: aerial spraying operations with glyphosate are suspended]. <http://www.odc.gov.co/INICIO/Noticias/ArtMID/2976/ArticleID/1167/Paso-hist243rico-hacia-una-nueva-pol237tica-de-drogas-se-suspende-la-aspersi243n-con-glifosato>. Accessed 25 February 2018.

⁴⁵ *El Espectador* (2015) El fin de las fumigaciones con glifosato [The end of aerial spraying operations with glyphosate]. <http://www.elespectador.com/noticias/politica/el-fin-de-fumigaciones-glifosato-articulo-590103>. Accessed 25 February 2018.

⁴⁶ United States Secretary of State 2017; see also Isacson A (2017) Colombia and Drugs: Rex Tillerson's "Coca Confusion". The Crime Report: Criminal Justice Network. <https://thecrimereport.org/2017/06/27/colombia-and-drugs-washingtons-coca-confusion/>. Accessed 5 May 2018.

⁴⁷ *T-080/17* case, above n 26, paras 7.14, 7.15.

decision to restart the aerial spraying program must be based on objective and conclusive evidence showing that it will cause no harm to human health or the environment.⁴⁸

7.3 Can Some of the Operations of Aerial Spraying of Illicit Crops with Glyphosate Carried Out in Colombia Amount to “Attacks” Under International Humanitarian Law?

Given the strong evidence, pointed out by Knudsen⁴⁹ and Landel,⁵⁰ that guerrilla movements and paramilitary groups have used the income provided by drug-trafficking to finance their military efforts in the NIAC in Colombia,⁵¹ the question arises as to whether some of the operations of aerial spraying with glyphosate carried out in Colombia could amount to “attacks” under IHL.

The definition of the expression “attacks”, which is used in numerous instances in the Additional Protocols to the Geneva Conventions, is provided for in Article 49(1) of Additional Protocol I (AP I), which as a matter of international customary law is also applicable to NIACs.⁵² According to this provision, “[a]ttacks” means acts of violence against the adversary, whether in offence or in defence”.⁵³

In its commentary, the International Committee of the Red Cross (ICRC) highlights that the meaning to be given to the expression “attacks” in Article 49(1) of AP I “[...] is not the same as the usual meaning of the word.”⁵⁴ According to the ICRC, the drafters chose to give a broad meaning to this expression, so as to include all acts of violence against the adversary (hostile acts), regardless of their defensive or offensive nature.⁵⁵ This expression also includes acts whose violent effects are delayed, such as the placing of mines.⁵⁶

As Melzer has pointed out, whether the violence is directed against legitimate objectives or against protected persons and objects is irrelevant for the existence of an attack.⁵⁷ Schmitt endorses this view by underscoring that “the prohibition on

⁴⁸ Ibid., paras 4.7, 5.4.

⁴⁹ Knudsen 2012–2013, pp 55 et seq.

⁵⁰ Landel 2010, pp 491 et seq.

⁵¹ Washington Office on Latin America 2008, pp 9, 12.

⁵² Henckaerts and Doswald-Beck 2005, pp 5–8.

⁵³ Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 3 (entered into force 7 December 1979) (AP I), Article 49(1).

⁵⁴ Sandoz et al. 1987, p 603.

⁵⁵ Ibid.

⁵⁶ Ibid. See also Melzer 2008a, p 270.

⁵⁷ Melzer 2008a, p 270.

attacking civilians irrefutably confirms that the *sine qua non* criterion is violence, not the individual or entity that is the object of an attack.”⁵⁸ The Study Group that drafted in 2016 the Tallinn Manual on the International Law applicable to cyber warfare (“the Tallinn Manual Study Group” or “the Study Group”) also supports this approach when interpreting the expression “against the adversary” in Article 49(1) of AP I. For the Study Group, “it is not the status of an action’s target that qualifies an act as an attack, but rather its consequences. Therefore, acts of violence, or those having violent effects, directed against civilians or civilian objects, or other protected persons or objects, are attacks.”⁵⁹

Concerning the interpretation of the notion of “acts of violence” in the definition of “attacks” in Article 49(1) of AP I, Schmitt considers that it contains a requirement of “physical force”.⁶⁰ Therefore, for this author, “the concept of ‘attacks’ does not encompass dissemination of propaganda, embargoes, or other non-physical means of psychological or economic warfare.”⁶¹ Nevertheless, the Tallinn Manual Study Group questions this approach. For the Study Group, “acts of violence” should not be understood as limited to activities that release kinetic force,⁶² because chemical, biological or radiological attacks are universally consider as attacks according to IHL despite not having a kinetic effect on their targets.⁶³ As a result, for the Study Group, the term “acts of violence” is not limited to violent acts, but also includes acts that cause violent consequences. Consequently, it is not the nature of an operation but the violent consequences caused by such operation that makes it an attack.⁶⁴

In relation to the type of violent consequences that an operation must cause to qualify as an attack under Article 49(1) of AP I, Melzer emphasizes that “there appears to be no threshold requirement with regard to the nature or intensity of the violence sufficient to qualify as an attack within the meaning of the law of hostilities.”⁶⁵ Nevertheless, the Tallinn Manual Study Group disagrees as it considers that to qualify as an attack an operation must be reasonably expected to cause injury or death to persons or damage or destruction to objects.⁶⁶ In relation to individuals, the Study Group also considers that the definition of attack should also encompass operations causing serious illness and severe mental suffering that are tantamount to injury.⁶⁷ Moreover, in relation to objects, the notion of attack should also

⁵⁸ Schmitt 2012, p 290.

⁵⁹ Schmitt 2013, p 108.

⁶⁰ Schmitt 2012, p 290.

⁶¹ Ibid.

⁶² Schmitt 2013, p 106.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Melzer 2008a, p 270.

⁶⁶ Schmitt 2013, p 107.

⁶⁷ Ibid., p 108.

encompass operations that affect the functionality of objects in such a way that their restoration requires replacement of their physical components.⁶⁸

The analysis of whether the operations carried out under the program of aerial spraying of illicit crops with glyphosate in Colombia amount to “attacks” under IHL must be made on a case-by-case basis.⁶⁹ Hence, it is not possible to make an overall assessment for the program as a whole.

According to the detailed account given by Moreno of the aerial spraying operations carried out in Colombia between 1978 and 2015,⁷⁰ as well as the 2008 Report of US Government Accountability Office,⁷¹ some of these operations, in particular those carried out in areas with a strong presence of the ELN and the FARC, were characterized by:

- (i) Their goals: a primary goal of such operations has been to put an end to one of the main sources of income of the said guerrilla movements that have confronted the Colombian government in a NIAC for decades;
- (ii) Their means: combat helicopters and military aircrafts have been regularly used in the said operations to pour a glyphosate-based chemical mixture over illicit crops;
- (iii) Their consequences on:
 - a. The fumigated illicit crops: physical destruction of the broadleaf plants and grasses that prevented any use of the land for farming for more than six months;
 - b. The farmers who cultivated the fumigated illicit crops: displacement caused by the loss of their means of survival and the impossibility to cultivate the land for several months; and
 - c. The nearby licit crops, water sources and human beings: physical destruction of the broadleaf plants and grasses of licit crops, pollution of water resources and several public health problems (including vomiting, diarrhea, eye problems and skin cancer) as a result of (a) their close vicinity to the fumigated illicit crops (some aerial spraying operations took place as close as 100 m away from residential areas); and (b) the height and high speed at which some of the operations were carried out to avoid interception by ELN and FARC members on the ground.

In light of the aforementioned, it can be concluded that some of the operations carried out under the program of aerial spraying of illicit crops with glyphosate in Colombia can be considered as “attacks” under IHL. This is particularly the case with those operations carried out in areas with a strong presence of the ELN and the FARC that had all, or at least most, of the above-mentioned characteristics. The fact that these operations targeted objects that were the result of unlawful activities

⁶⁸ Ibid.

⁶⁹ Henckaerts and Doswald-Beck 2005, pp 23–25.

⁷⁰ Moreno 2015, pp 18–21.

⁷¹ United States Government Accountability Office 2008, pp 24–26.

(illicit crops) is irrelevant for their consideration as attacks under IHL, because as Melzer,⁷² Schmitt⁷³ and the Tallinn Manual Study Group⁷⁴ have pointed out, it is not the status of the target of an operation that makes it an attack, but rather its consequences.

7.4 Are the Targets of Aerial Spraying Operations in Colombia, that Amount to Attacks, Lawful Under International Humanitarian Law?

As seen in the previous section, some of the operations carried out under the program of aerial spraying of illicit crops with glyphosate in Colombia can be considered “attacks” under IHL. As a result, the question arises as to whether the targets of such operations, that is, the illicit crops and the farmers who grow them for some of the parties to the NIAC in Colombia, are lawful targets under IHL.

7.4.1 Are Illicit Crops a Lawful Target?

Article 52(2) of AP I is the starting point to answer the question whether illicit crops are lawful targets under IHL in NIACs because of its customary status in international armed conflicts (IACs) and in NIACs.⁷⁵ According to this provision, “[a]ttacks shall be limited strictly to military objectives.” Article 52(2) of AP I also contains the definition of military targets applicable to IACs and NIACs, which is comprised of a two-pronged test. The first prong circumscribes the notion of military target to those objects which “[...] by their nature, location, purpose or use make an effective contribution to military action.”

The notion of military target is not limited to only those objects of an intrinsic military nature, such as weapons, fortifications or missile launching sites.⁷⁶ It also encompasses objects that due to their location make an effective contribution to military action, such as bridges, walkways and tunnels, as well as hills, canyons or areas whose control facilitates the execution of military operations or constitute an

⁷² Melzer 2008a, p 270.

⁷³ Schmitt 2012, p 290.

⁷⁴ Schmitt 2013, p 106.

⁷⁵ Henckaerts and Doswald-Beck 2005, p 30; see also Schmitt 2013, p 125.

⁷⁶ International Law Association Study Group on the Conduct of Hostilities in the 21st Century 2017, p 329.

obstacle for enemy's attacks.⁷⁷ The same is true for objects that due to their current or intended future use (purpose) make an effective contribution to war-fighting.⁷⁸ According to the ICRC, they include all objects directly used by the armed forces, as well as dual-function objects that are used simultaneously for military and civilian purposes (e.g. a power plant that provides electricity to both a school and a military camp).⁷⁹ They also include those objects in relation to which "a reasonable commander who bases her/his decision on the information from all sources which are available to him/her concludes that he/she has sufficiently reliable information to determine that an object will, in the future, make an effective contribution to the enemy's military action."⁸⁰

To fulfill the first prong of the definition of military target under Article 52(2) of AP I, the relevant object must make an effective contribution to military action. As the International Law Association Study Group on the Conduct of Hostilities in the 21st Century ("the ILA Study Group") has pointed out, this means that "[t]he contribution must be directed towards the actual war-fighting capabilities of a party to the conflict."⁸¹ As a result, as Dinstein⁸² and Schmitt⁸³ have highlighted, there must be a proximate nexus to military action, understood as war-fighting.

The US Commander's Handbook on the Law of Naval Operations has interpreted this requirement in a more flexible way by allowing a proximate nexus between the contribution of the relevant object and the war sustaining capabilities of an adverse party.⁸⁴ Nevertheless, the ILA Study Group has found no State practice supporting the claim that those objects that only contribute to the war-sustaining effort of an adverse party can qualify as military targets.⁸⁵

As most civilian activities can be interpreted as indirectly sustaining the war effort of an adverse party, even in naval warfare, where economic blockades are lawful, such blockades must always be directed against goods that are sent to

⁷⁷ Sandoz et al. 1987, p 636; Olasolo 2008, p. 121; Rogers 2004, p 64; Gasser 1989, p 87.

⁷⁸ Kalshoven 1971, pp 110–112; Barras and Erman 1982, p 271.

⁷⁹ Sandoz et al. 1987, p 636: A very important part of those infrastructures normally used for civilian purposes can also be used for military purposes during armed conflicts. Refurbished schools, hotels and churches can be used to provide accommodation for troops, store military equipment or host command posts. Industrial and power plants can also be used for military purposes. See also Kalshoven 1971, pp 110–112; International Law Association Study Group on the Conduct of Hostilities in the 21st Century 2017, pp 335–338.

⁸⁰ *Ibid.*, p 333. See also Henckaerts and Doswald-Beck 2005, Rule 15.

⁸¹ International Law Association Study Group on the Conduct of Hostilities in the 21st Century 2017, p 340.

⁸² Dinstein 2016, pp 96–96.

⁸³ Schmitt 2015, p 297.

⁸⁴ United States Department of the Navy 2017, para 8.2. See also Goodman 2016.

⁸⁵ International Law Association Study Group on the Conduct of Hostilities in the 21st Century 2017, p 341.

further the war-fighting effort of an adverse party.⁸⁶ As a result, as the Tallinn Manual Study Group,⁸⁷ the Manual on International Law Applicable to Air and Missile Warfare prepared by the Programme on Humanitarian Policy and Conflict Resolution at Harvard University⁸⁸ and the San Remo Manual on International Law Applicable to Armed Conflicts at Sea⁸⁹ have underscored, the link between the exports required to finance the war efforts and military action (war-fighting) is too remote to meet the first prong of the definition of military target under Article 52(2) of AP I.

The second prong of the definition of military target under Article 52(2) of AP I requires that the “total or partial destruction, capture or neutralization” of the relevant object offers in the circumstances ruling at the time a “definitive military advantage”. The reference to the “circumstances ruling at the time” makes clear that the assessment of the notion of military target must be carried out on a case-by-case basis.⁹⁰

According to the ICRC, “[a] military advantage can only consist in ground gained and in annihilating or weakening the enemy armed forces.”⁹¹ For the ILA Study Group, “[i]t also can include targets that are used for direct logistical support, for military communications and maneuver, as well as production facilities engaged in producing arms or goods for military use.”⁹² Moreover, as Solf has highlighted, the military advantage offered by the total or partial destruction, capture or neutralization of the relevant object must reach the threshold of “definitive”, which means that, at the very least, it must be “concrete and perceptible”.⁹³

Both the ICRC and the ILA Study Group consider that objects whose total or partial destruction, capture or neutralization can only offer a political or economic advantage do not meet the second prong of the definition of military target under Article 52(2) of AP I.⁹⁴ Likewise, as Schmitt has pointed out, gaining a diplomatic advantage, such as forcing a change in the negotiating position of an adverse party, is not sufficient to meet this second prong.⁹⁵ Hence, as Dinstein has underscored, the statement of the Eritrea-Ethiopia Claims Commission that “there can be few military advantages more evident than effective pressure to end an armed conflict”

⁸⁶ Ibid.

⁸⁷ Schmitt 2013, pp 130–131.

⁸⁸ Program on Humanitarian Policy and Conflict Research at Harvard University 2009. See also Program on Humanitarian Policy and Conflict Research at Harvard University 2010, p 110.

⁸⁹ Doswald-Beck 1995, para 60.27.

⁹⁰ International Law Association Study Group on the Conduct of Hostilities in the 21st Century 2017, p 328.

⁹¹ Sandoz et al. 1987, p 685.

⁹² International Law Association Study Group on the Conduct of Hostilities in the 21st Century 2017, p 343.

⁹³ Solf 2013, p 367.

⁹⁴ Sandoz et al. 1987, p 685; International Law Association Study Group on the Conduct of Hostilities in the 21st Century 2017, p 343.

⁹⁵ Schmitt 2015, pp 253–354.

should be rejected, because it allows for an exclusively political advantage to meet the second prong of the definition of military target.⁹⁶

Both prongs of the definition of military target under Article 52(2) of AP I are cumulative.⁹⁷ As a result, the position held by Dinstein that the fulfillment of the first prong of the definition almost automatically offers a definitive military advantage that fulfills the second prong cannot be shared.⁹⁸ As Boivin,⁹⁹ Geiß and Lahmann¹⁰⁰ and Oeter¹⁰¹ have pointed out, the second prong of the definition aims at limiting the range of objects that fulfill the first prong and can be lawfully attacked.

The definition of military target provided for in Article 52(1) of AP I has been criticized for not paying due attention to the structures that indirectly keep the military efforts of the parties to the conflict going (the so-called economic targets, such as the export industries).¹⁰² Nevertheless, despite this criticism, Article 52(2) of AP I is regarded today as part of international customary law in IACs and NIACs.¹⁰³

Illicit crops supporting the military efforts of one of the parties to the conflict are economic objectives. In particular, cultivation of the coca leaf has been, and continues being, the main “export industry” supporting the military efforts of those organized armed groups fighting the Colombian government. Nevertheless, this does not make illicit crops a military target, because: (i) they only indirectly sustain the war effort of some of the parties to the NIAC in Colombia and therefore they lack the required proximate nexus to military action, understood as war-fighting; and (ii) their total or partial destruction only offers an economic advantage that cannot be equated with military advantage for the purpose of Article 52(2) of AP I. As a result, neither of the two prongs of the definition of military target under this provision is met by illicit crops, and, therefore, they are not lawful targets.

The definition of military objective is particularly difficult to apply to dual-use objects and infrastructures.¹⁰⁴ For this reason, Article 52(3) of AP I provides that “in case of doubt whether an object which is normally dedicated to civilian purposes, such as a place of worship, a house or other dwelling or a school, is being used to make an effective contribution to military action, it shall be presumed not to be so used.” Accordingly, all buildings that are normally dedicated to civilian purposes, and which are in the vicinity of the front-line, must be presumed to be

⁹⁶ Dinstein 2016, p 93.

⁹⁷ International Law Association Study Group on the Conduct of Hostilities in the 21st Century 2017, p 327.

⁹⁸ Dinstein 2016, p 91.

⁹⁹ Boivin 2006, pp 15–16.

¹⁰⁰ Geiß and Lahmann 2012, p 388.

¹⁰¹ Oeter 2013, p 169.

¹⁰² Parks 1990, pp 135–145.

¹⁰³ Henckaerts and Doswald-Beck 2005, p 30.

¹⁰⁴ Landel 2010, pp 509–510.

civilian.¹⁰⁵ As a result, only when the attacker is convinced that such buildings are actually being used by the enemy to accommodate troops, or to otherwise contribute to the military action of an adverse party, may they be attacked.

The same holds true for the land where illicit crops are grown. Consequently, unless such land is also used for other purposes that meet the two prongs of the definition of military target under Article 52(2) of AP I, it is not a lawful target. Moreover, as aerial spraying with glyphosate is not specifically designed to destroy or capture military targets that may be located in the fields where illicit crops are grown (on the contrary, it is designed to destroy the illicit crops as such), the use of aerial spraying constitutes *prima facie* evidence that the real goal of the attackers is to destroy the illicit crops.

7.4.2 Can Those Persons Who Grow Illicit Crops for Some of the Parties to the NIAC in Colombia Be Lawfully Attacked?

After finding that illicit crops is not a lawful target under IHL, the question arises as to whether those persons who, voluntarily or forcibly, grow illegal crops for organized armed groups fighting the Colombian government can be lawfully attacked by the latter. To answer this question, one has to look into the IHL regulation of protected person status in NIACs. According to it, all those, who are not members of the armed forces of the State where a NIAC takes place, are, in principle, protected persons, and thus cannot be attacked.¹⁰⁶ Nevertheless, when, due to the activities that they carried out, protected persons become members of an organized armed group involved in a NIAC, they lose their protection and can be lawfully attacked for so long as they remain members of the group.

Not every person who cooperates with an organized armed group automatically becomes a member of such group. For the ICRC, only those who carry out a continuous combat function within an organized armed group are members of it.¹⁰⁷ This includes: (i) those who prepare, organize or execute the military operations of an organized armed group; and (ii) those who are recruited, trained and equipped by an organized armed group to direct or conduct hostilities in the group's name, even if they have not gotten materially involved in any hostile act.¹⁰⁸

Those who merely accompany or provide support over time to an organized armed group do not carry out a continuous combat function, even if they use uniforms, badges or identification cards.¹⁰⁹ Consequently, unless they undertake

¹⁰⁵ Sandoz et al. 1987, p 636.

¹⁰⁶ Melzer 2008b, p 1004.

¹⁰⁷ Williamson 2010, p 464.

¹⁰⁸ Melzer 2008b, p 1007.

¹⁰⁹ *Ibid.*, p 1006.

additional tasks that are directly involved in hostilities, they cannot be regarded as members of the group. According to the ICRC, they are part, but not members, of the group, and therefore they do not lose their protected status.¹¹⁰ The same holds true for (i) those involved in acts of recruitment, financing, or training for an organized armed group;¹¹¹ (ii) those who produce, acquire and make maintenance of the group's weapons and ammunition; and (iii) those who gather intelligence for the group, that is not related to any specific military operation.¹¹²

Accordingly, even in cases where illicit crops, particularly coca, are used to finance the military efforts of an organized armed group fighting the Colombian government, this does not make those growing the coca crops members of such group. They would only acquire that status if they carry out additional tasks for the said group that are directly link to the hostilities. Nevertheless, as Landel has pointed out, the evidence gathered so far does not indicate that this is the case of the vast majority of illicit crops growers.¹¹³

Persons who are not members of any of the parties to the conflict may also lose their protected status in the NIAC by carrying out activities of "direct participation in hostilities".¹¹⁴ Direct participation of protected persons in hostilities has grown steadily both in IACs and NIACs during the second half of the twentieth century and the early twenty-first century. This is due to the added value for the contending parties of the involvement of private contractors, informants, carriers and employees in the preparation and conduct of military operations.¹¹⁵ It is in this context that the question of whether growing illicit crops for one party to the conflict constitutes direct participation in hostilities arises.

Common Article 3(1) to the 1949 Geneva Conventions uses the expression "persons taking no active part in hostilities."¹¹⁶ This is the origin of the expression "direct participation in hostilities," which is contained in Articles 51(3) of AP I and 13(3) of AP II. According to these last two provisions, protected persons in IACs and NIACs lose their protection when they directly participate in hostilities for as long as their direct participation lasts.¹¹⁷ Hence, it is important to distinguish those

¹¹⁰ *Ibid.*, p 1008.

¹¹¹ *Ibid.*, p 1021.

¹¹² *Ibid.*, pp 1008, 1021, 1022.

¹¹³ Landel 2010, p 506.

¹¹⁴ Henckaerts and Doswald-Beck 2005, pp 19–24. See also Boothby 2010, 162; Melzer 2012, 890.

¹¹⁵ On the involvement of civilians in the armed conflicts of the XXI century, see Schmitt 2010, p 5; see also Williamson 2010, pp 464 et seq.

¹¹⁶ Geneva Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field, opened for signature 12 August 1949, 75 UNTS 31 (entered into force 21 October 1950), Article 3(1).

¹¹⁷ Article 51 (3) of AP I, above n 53, establishes: "Civilians shall enjoy the protection afforded by this Section, unless and for such time as they take a direct part in hostilities." In turn, Article 13 (3) of Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts, opened for signature 8 June 1977,

activities that amount to direct participation in hostilities from those other activities that do not reach this threshold, despite indirectly contributing to the military effort of any of the parties to the conflict.

Treaty and customary International Law do not provide a definition of the notion of direct participation in hostilities.¹¹⁸ Most military manuals merely state that the determination of whether a particular activity amounts to direct participation in hostilities should be made on a case-by-case basis. Some military manuals add that among the activities that give rise to direct participation in hostilities are acting as intelligence agents, scouts or messengers, as well as serving as guards or spies for one the parties to the conflict.¹¹⁹

The Inter-American Commission on Human Rights (IACHR) has highlighted that the expression “direct participation in hostilities” normally covers acts which, by their nature or purpose, intend to cause harm to personnel or material of an adverse party.¹²⁰ The IACHR has distinguished between these acts and cases of indirect participation in support of one of the contending parties (i.e. selling goods, expressing sympathy or failing to prevent military operations). For the IACHR, indirect participation does not bring about the loss of protected status because it does not involve violence and does not pose an immediate threat of harm to the adverse parties.¹²¹

Schmitt adopts a broader notion of “direct participation in hostilities” when defining it as a protected person’s involvement in an integral part of a military operation aimed at harming one party to the conflict and benefiting another.¹²² Whether or not such person is in the battlefield is irrelevant.¹²³ Williamson highlights that even if this broader definition was to be applied, logistical contributions to the war effort made by contractors and civilian employees of any of the contending parties would not amount to direct participation in hostilities.¹²⁴

The notion of “direct participation in hostilities” endorsed by the ICRC is narrower than the one put forward by Schmitt. As Melzer has explained, it is comprised of the following three elements: (i) a gravity threshold that must be met by

1125 UNTS 609 (entered into force 7 December 1978) (AP II) states: “Civilians shall enjoy the protection afforded by this Part, unless and for such time as they take a direct part in hostilities.”

¹¹⁸ Melzer 2008b, p 1012: Although a notion of direct participation in hostilities could have been provided by the Appeals Chamber of the International Criminal Tribunal for the former Yugoslavia (ICTY) in the *Strugar* case, it did not do so. See ICTY, *Prosecutor v Pavle Strugar*, Appeals Judgement, 17 July 2008, Case No. IT-01-42-A, paras 173–175.

¹¹⁹ See the report on the practice in Military Manuals of Ecuador (section 822), the United States (section 830) and the Philippines (section 849) referred to by Henckaerts and Doswald-Beck 2005, p 22.

¹²⁰ Inter-American Commission on Human Rights 1999, chapter IV para 53.

¹²¹ *Ibid.*, para 56.

¹²² Schmitt 2004, pp 519–520.

¹²³ This is the case for missile operators, who may be miles away from military targets, but whose activity is crucial for the implementation of the operation. See McDonald 2004.

¹²⁴ Williamson 2010, p 463.

the damage that a protected person's conduct will probably cause to one of the contending parties;¹²⁵ (ii) a direct causal link between the protected person's conduct and the probable damage;¹²⁶ and (iii) a belligerent nexus between the protected person's conduct and the hostilities as a result of aiming at harming one of the contending parties and benefiting another.¹²⁷

Whatever position on the notion of direct participation in hostilities is embraced, growing illicit crops for one contending party does not amount to direct participation in the hostilities. If one follows the position of the IACHR, the nature and purpose of growing illicit crops does not aim at causing harm to personnel or material of the adverse party. If, on the contrary, Schmitt's position is followed, it is clear that the activity of growing illicit crops is so far removed from any specific military operation that it cannot be an integral part of any such operation. As a result, financial contributions to the contending parties' war efforts through the growing of illicit crops do not amount to direct participation in hostilities. The same conclusion is reached if one applies the three-prong definition adopted by the ICRC.

Consequently, it can be concluded that growing illicit crops for one contending party does not constitute *per se* an act of direct participation in hostilities. Hence, those who get involved in such activity do not lose their protected status and, therefore, cannot be lawfully attacked, unless they carry out additional tasks for a contending party that amount to direct participation in hostilities.

7.5 Conclusions

Despite the Colombian government's decision in 2015 to suspend all operations of aerial spraying of illicit crops with glyphosate, critics of the suspension and the Trump Administration have increased internal and external pressure on the Colombian government to restart the program.

¹²⁵ Such damage may consist of military personnel's death or injury, the destruction of military infrastructures or the killing, injury or destruction of protected persons or objects. Direct participation in hostilities requires the objective probability that the protected person's conduct may cause any of these types of damage. Consequently, what must be analyzed is the damage that, under the existing circumstances, can reasonably be expected to be caused by the protected person's conduct. See Melzer 2008b, pp 1016–1018.

¹²⁶ According to the ICRC, it is necessary to take into account three factors to determine whether the relationship between the cause (act) and the effect (damage) is sufficiently direct: (i) the existence of a single causal sequence; (ii) the integrity of the military operation as a whole; and (iii) the spatial and temporal proximity, or remoteness, of the act to the area of hostilities. See Melzer 2008b, pp 1019–1020.

¹²⁷ Those acts which do not aim at harming one party to the conflict and benefiting another do not have the required belligerent nexus. According to the ICRC, this is the situation when: (i) acting in self-defense; (ii) exercising power or authority over persons or property located in a territory; (iii) carrying out civil protest riots; or (iv) resorting to violence between protected persons. See Melzer 2008b, pp 1025–1027.

Several factors, including the Colombian government's acknowledgement of the existence of a NIAC in Colombia and the use by guerrilla and paramilitary groups of the income provided by drug-trafficking, particularly cocaine, to finance their military efforts, call into question the understanding of the program of aerial spraying of illicit crops with glyphosate in Colombia as an exclusive IHRL matter. As a result, an IHL approach to the program should also be taken into consideration in deciding whether to restart the program. This is fully consistent with the joint application of IHRL and IHL in armed conflicts.

The legality analysis under IHL of the aerial spraying program in Colombia has exclusively focused so far on whether the glyphosate-based chemical mixture poured into Colombian illicit crops violates the prohibition against the use of chemical and biological weapons. In the absence of the necessary scientific studies to provide a definitive answer to this question, this chapter has focused on two other issues of the IHL analysis of the program which have not gotten enough attention so far.

Concerning the first issue, it must be highlighted that, in light of their goals, means and consequences, some of the operations carried out under the program of aerial spraying of illicit crops with glyphosate in Colombia can be considered as attacks under the definition provided for in Article 49(1) of AP I, which as a matter of customary international law is also applicable to NIACs. This is the case, in particular, of those operations carried out in areas with a strong presence of the ELN and the FARC.

With regard to the second issue, it can be concluded that aerial spraying operations amounting to attacks under IHL are not specifically designed to destroy or capture military targets that may be located in the fields where illicit crops are grown. The use of aerial spraying constitutes *prima facie* evidence that the real goal of the attackers is to destroy the illicit crops as such. Nevertheless, illicit crops, as well as those farmers growing them for organized armed groups fighting the Colombian government, such as the ELN, are protected against attacks by IHL. Hence, they are unlawful targets for the Colombian government, unless they have lost their protected status.

As a result, those aerial spraying operations that, due to their goals, means and consequences, qualify as attacks under Article 49(1) of AP I are prohibited by IHL, even if such illicit crops contribute to finance the military efforts of some of the parties to the NIAC in Colombia. This conclusion is reached regardless of whether aerial spraying with glyphosate constitutes a type of weaponry that violates the IHL prohibition against the use of chemical and biological weapons.

As a consequence, and without prejudice to the findings of a legality analysis of the aerial spraying program in Colombia from an IHRL perspective, if the Colombian government decides to restart the program, it will have to design its aerial spraying operations so as to make sure that they do not amount to attacks under IHL.

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