

Environment and Armed Conflict: Perspectives of Former Combatants of the Revolutionary Armed Forces of Colombia (FARC)

Medio ambiente y conflicto armado: perspectivas de excombatientes de las Fuerzas Armadas Revolucionarias de Colombia (FARC)

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Abstract

Colombia is home to the longest-running armed conflict in history. This situation has had negative repercussions on various social, economic, political, and environmental aspects. Specifically, this study aimed to analyze the environmental consequences of the armed conflict in Colombia through the interpretation of general notions about the conflict and its link to environmental degradation. To accomplish this task, an exploration of the context was conducted, including the general characteristics of the territory that contributed to the emergence of the conflict, the environmental damages caused during the war, and the main actors involved in the degradation of the territory, based on the perceptions, opinions, experiences, and feelings of former combatants. Information was collected through in-depth interviews. The results focused on understanding the significant elements of the link between the environmental situation and the post-peace agreement period. This study prompts reflection on the indirect implications of war and provides valuable insights for the design and implementation of public policies aimed at preventing environmental deterioration, promoting reconciliation, and improving the living conditions of the affected population.

Keywords: Environment; armed conflict; FARC; Colombia.

Resumen

Colombia es sede del conflicto armado más largo de la historia. Esta situación ha tenido repercusiones negativas en diversos aspectos sociales, económicos, políticos y ambientales. Específicamente, este estudio tuvo como objetivo analizar las consecuencias ambientales del conflicto armado en Colombia a través de la interpretación de nociones generales sobre el conflicto y su vínculo con la degradación ambiental. Para llevar a cabo esta tarea, se realizó una exploración del contexto, incluyendo las características generales del territorio que contribuyeron al surgimiento del conflicto, los daños ambientales causados durante la guerra y los principales actores involucrados en la degradación del territorio, en función de sobre las percepciones, opiniones, experiencias y sentimientos de los excombatientes. La información se recopiló a través de entrevistas en profundidad. Los resultados se centraron en comprender los elementos significativos del vínculo entre la situación ambiental y el período posterior al acuerdo de paz. Este estudio invita a reflexionar sobre las implicaciones indirectas de la guerra y proporciona valiosos conocimientos para el diseño e implementación de políticas públicas destinadas a prevenir el deterioro ambiental, promover la reconciliación y mejorar las condiciones de vida de la población afectada.

Palabras clave: Medio Ambiente, conflicto armado, FARC, Colombia.



1. INTRODUCTION

Some authors link the global environmental crisis to the neoliberal economic model (Libiszewski, 1992), which gained popularity in the 1980s and has influenced the development of economic policies and structural reforms in adopting countries. However, this type of economy has also generated criticism and controversy due to evident economic inequality, limited social protection policies, and the legacy of conflicts and financial crises (Stiglitz, 2002). Moreover, some argue that it leads to overexploitation, pollution, and resource expropriation (Moon and Nemesio, 2021).

It can be said that Colombia adopted a series of economic policies aimed at liberalization, trade openness, and reducing the role of the state in the economy since the 1990s (Observatorio de la Democracia, 2021). Although the armed conflict had its origins three decades earlier, one of the most violent scenarios of conflict occurred during the transition to neoliberalism. Inequality has been one of the factors fueling the armed conflict, generating tension and resentments in marginalized communities that feel excluded from the benefits of economic development. Additionally, the neoliberal drive towards attracting foreign investment and exploiting natural resources has created tensions in conflict-affected areas (Botero, 2021; Chambers and Furio, 2017; Gutiérrez et al., 2013).

In this context, it can be affirmed that Colombia has been the stage for a prolonged and complex internal armed conflict, leaving deep wounds in its society, economy, and social fabric (Centro Nacional de Memoria Histórica, 2016; Ríos, 2018; Zukerman, 2018). However, while the world has focused on the political, social, and economic aspects of the conflict, an equally crucial aspect has been overlooked: its impact on the environment. The environmental degradation caused by the armed conflict in Colombia has been a tragic and often forgotten consequence of this protracted confrontation (Vargas, 2020).

The Colombian armed conflict has occurred in areas of abundant natural resources and potential biodiversity (Homer-Dixon, 1996; Arredondo, 2004; Lavaux, 2004; Hanson, 2009; Medina, 2017; Negret, 2019; Salazar et al., 2022). It has affected the country's diverse ecosystems and natural resources, from lush jungles to fragile coastal areas and high mountain paramos. The presence of illegal armed groups, the expansion of illicit drug cultivation, illegal mining, and deforestation have left deep scars on the Colombian landscape (Gutiérrez-Sanín et al., 2021). As armed groups have fought for territorial control, they have resorted to the unrestrained exploitation of natural resources, causing unprecedented environmental devastation (Rodríguez-Díaz et al., 2021).

In addition to the aforementioned, environmental degradation as a consequence of the armed conflict has not only impacted local biodiversity and ecosystems but has also had negative consequences for the development of local communities that depend on natural resources for their subsistence (Rodríguez, 2020). The pollution of rivers and water sources, land degradation for cultivation, and the loss of natural habitats have severely affected the food security and quality of life of thousands of people in

the country (Calle-Rendón et al., 2018). Moreover, the forced displacement of some communities has put additional pressure on the ecosystems of receiving areas, further exacerbating nature's deterioration (Hernández-Rodríguez et al., 2022).

Therefore, it is essential to understand the interaction between the armed conflict and environmental degradation in Colombia. The construction of lasting and sustainable peace necessarily requires addressing the protection and preservation of the natural environment. Governments must protect the environment during armed conflicts and collaborate in the development of their territories, as established in the Agreements on Environmental sustainability in the city of Rio de Janeiro (1992). This implies not only halting the current environmental destruction but also promoting the restoration of damaged ecosystems and ensuring the active participation of local communities in the sustainable management of natural resources.

This text provides a description of the theoretical constructs of the armed conflict, followed by an analysis of the general context of the Colombian territory, including elements of its social, political, and economic environment. These aspects are directly related to the origin, prolongation, and even the persistence of the armed conflict (Bejarano, 1986; Harnecker, 1988; Bannon and Collier, 2003; Collier, 2008; Goebertus, 2008; Arias & Ibáñez, 2012; García, 2013; Sandoval, Marn and Almanza, 2017; Hernández et al, 2018). In addition to that, it will explore in detail the various ways in which the armed conflict has contributed to environmental degradation. References will also be described that complexly link the Revolutionary Armed Forces of Colombia (FARC) as a leading actor in controlling natural resources (García, 2005; Hoddie, 2018). The impacts on biodiversity, deforestation, water resource pollution, illegal mining, and other phenomena that have undermined the health and integrity of the Colombian environment will be addressed.

The objective of this study was to analyze the environmental repercussions of the armed conflict in Colombia through the interpretation of general notions about the conflict and the perceptions, opinions, experiences, and feelings of ex-combatants. Following that, a methodological approach will be presented, highlighting the use of Grounded Theory as a perspective for data analysis through constant comparison techniques. Subsequently, the findings will be explained from the perspective of the ex-combatants of the Revolutionary Armed Forces of Colombia (FARC-EP) in relation to the environmental topics that are the object of this study. It concludes with the importance of integrating environmental protection into peacebuilding processes, as well as the need for concerted actions to reverse environmental degradation and promote sustainable development in Colombia.

2. DEVELOPMENT

2.1. *Methodological approach*

In this research, a qualitative methodological approach was employed to obtain a deep and detailed understanding of the experiences, perceptions, and meanings attributed by the participants in relation to the study topic. This type of research allows for a

profound and holistic understanding of the multiple dimensions and nuances of the environmental issue and its connection to the armed conflict, from the perspective of former combatants of the FARC-EP who participated in the insurgency, focusing on the quality of experience and richness of the collected data. Consequently, a non-experimental research with a descriptive scope was developed since there were no modifications to the natural conditions during data collection.

Semi-structured and in-depth interviews were used as the research technique, which allowed for a variety of perspectives and direct evidence from the ex-combatants. These interviews were conducted in person at various training and social reintegration centers in Colombia during 2020. Open-ended questions and active listening were crucial in encouraging participation and promoting the expression of individual viewpoints.

The sample was obtained through snowball sampling, intentional sampling, reasoned sampling, and flexible sampling, with inquiries made about positive or negative externalities presented in the context of the armed conflict and with an emphasis on stating the responsibilities of its actors. Five interviews were conducted, and the participants were labeled with the abbreviation “P” followed by a continuous numbering from 1 to 5.

The data analysis followed an inductive approach. The interviews were transcribed and systematically coded, identifying patterns, themes, and emerging relationships. Qualitative software tools were used to facilitate the analysis process and management of the collected data. The first step in processing the interview data involved conducting a noun similarity analysis using the linguistic software resource T-lab. This created relationships of proximity and distance with a root concept of work. The adjacency shown was proportional to the level of semantic similarity and importance in the context of the descriptor ideas.

Subsequently, rounds of coding were conducted using Grounded Theory ([Strauss and Corbin, 2002](#)) for a categorical analysis of verbatim. A coding process with levels of abstraction was deployed to capture the meaning of the statements made by the ex-combatants regarding topics related to environmental damage or the care of natural resources. Finally, the emerging findings were compared and discussed in dialogue with the literature on the general context of the research.

It is worth noting that rigorous measures were taken to guarantee the confidentiality and protection of the participants. Informed consent was obtained from all ex-combatants, and they were informed about the use of pseudonyms to preserve their anonymity in reports and results. In summary, the methods used provided a solid foundation for exploring the phenomenon of the study in depth, capturing the voices and perspectives of the participants in a meaningful way. The qualitative data collected in this research offered a detailed and contextualized insight into the armed conflict and its connection to environmental degradation, enriching understanding and generating relevant knowledge.

2.2. *Discussion*

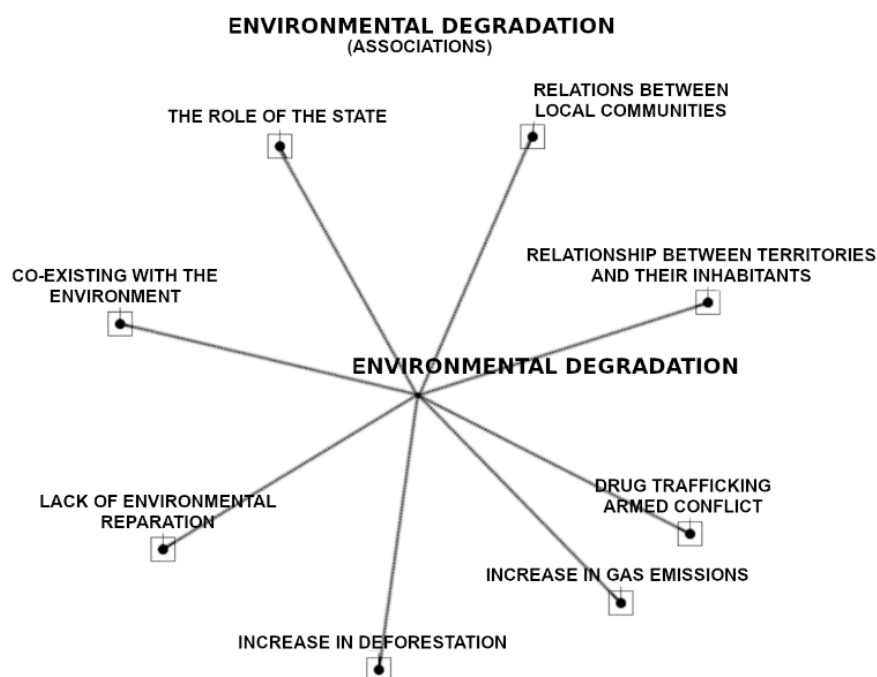
Within the framework of the armed conflict, environmental uncertainty was evident. The state did not protect parts of its territory, leading to scenarios of damage. The central category that emerged was “environmental degradation”. What was at stake was the loss of natural resources through deforestation, pollution, and biodiversity loss. These outcomes were a result of war, drug trafficking, and uncontrolled exploitation of natural resources.

The ex-combatants mentioned some social and economic consequences of environmental deterioration, such as the disappearance of resources that had sustained human life and the impact on affected communities. The underlying idea was that environmental deterioration was a serious problem that needed to be urgently and effectively addressed to ensure the long-term sustainability of the country. Additionally, one interviewee mentioned:

The role of the state in the past should have been to regulate the relationships between territories and their inhabitants, providing them with the necessary tools to coexist with the environment and establish relationships beyond the basic ones among local communities. However, at that time in Colombia, this did not exist. The armed conflict and drug trafficking contributed to the increase in deforestation, which, in turn, led to an increase in greenhouse gas emissions, and nothing was being done to remedy it (P1).

Figure 1 shows the discursive association of the concept of environmental degradation with other words. An analysis was conducted to examine the linkage between the central category and in vivo nouns of verbatim, which contributed to the interpretation and contextualization of the thematic pattern. These word relationships highlighted environmental neglect associated with negative externalities to health and the absence of well-being for affected communities. It was a call for the preservation of the environment with a focus on sustainability. This raised the question: How can greater responsibility and commitment be fostered among the armed actors involved in the conflict to address the negative impacts left by their activities on the environment?

Figure I: Words associated with environmental degradation



Source: Own elaboration, based on results processed with T-lab. (2023)

Later on, first-level codes were identified, such as rehabilitating territories, tools for coexistence with the environment, environmental regulation to address deforestation, drug trafficking, and its impact on climate change. These were anchored to the second-level code “lack of intervention in environmental regulation”. In line with this, the following question arose: How has the role of the State evolved in Colombia over time in terms of environmental care and combating climate change in situations of conflict?

The descriptor inferred an inaction of control by the State regarding the balance between autonomy to meet the economic and social development needs of the locals and the care of the environment. The interviewee’s standpoint was that in a diverse and decentralized country, awareness on the issue had to be built. The challenge was to reach agreement among the involved parties’ interests.

Another central category was “armed struggle against capital concentration and improper land use”, in which the question arose about Colombia’s agricultural vocation. In response to this, some actors clung to their agricultural interests at the expense of other aspects such as environmental preservation and sustainable land use.

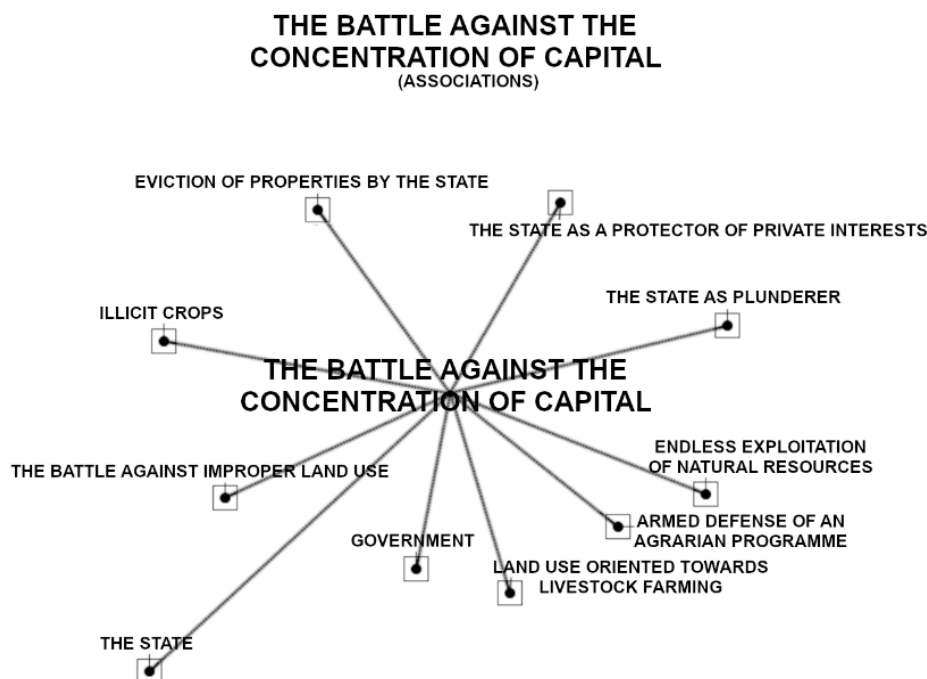
Regarding this question, P3 stated: “In the past, the Colombian State had the ability to invent new forms of violence and allowed unlimited exploitation of resources and illicit crops.” This was also related to the fight for equitable land distribution and the promotion of collective ownership of land. Therefore, the discussion on agricultural vocation was oriented towards food production and land use. In support of this, participants stated:

The Colombian State has been configured as a plunderer since the time of conquest and has become a tool to protect specific interests, dedicating limited lands to livestock breeding and developing ineffective transit routes that benefit only a few (P4).

In 1964, in Marquetalia, in July, the guerrillas designed the agrarian program. At the peak of the agrarian program, the guerrillas declared that the path was closed, and we had to resort to arms not because we wanted to, but because the government forced us to do it to protect ourselves since they were evicting us from the farms to make way for other projects and to demolish the farms and sell them to others (P5).

Figure 2 displays the discursive associations of the notion of combating capital concentration in other words. The similarity revealed close relationships with the term “government”. From the perspective of ex-combatants, this was associated with the defense of a fair land distribution policy and with the environmental impacts of extensive livestock farming. This raised the question: What have been the consequences of armed struggle in safeguarding agricultural interests, and how have the problems that lead to violence as a solution been effectively addressed?

Figure II: Associated words to combat on capital concentration



Source: Own elaboration, based on results processed with T-lab. (2023)

The above were associated with emerging codes: state corruption, unlimited exploitation of natural resources, guerrilla agrarian programs in the Marquetalia region, eviction of farms, and sale of land for private projects and illicit crops. As

a second-level code, the “Colombian state as a plunderer and protector of private interests in land accumulation” was obtained. Capital concentration and improper land use, along with social inequality, were catalysts for the conflict that resulted in the armed conflict. This raised the question: How has the unlimited exploitation of resources and illicit crops affected Colombian society and its environment? And what lessons can be learned from Colombian history to prevent state corruption and the protection of the agricultural vocation?

According to the ex-combatants, there was some tension between the Colombian state and the needs of the population, particularly in relation to the exploitation of natural resources and land distribution. This led to an armed struggle rooted in the opposing interests of landowners and the rights of peasants and local communities. Another tension mentioned was between the exploitation of natural resources and environmental care. According to the interviewees, these situations resulted in the use of violence as a means of protection against phenomena of state corruption and violation of the population’s rights.

The descriptor emphasized the need for political will in a discourse of environmental justice and equity. They also referred to inequitable land distribution, which they perceived as theft. This led to the displacement of legitimate landowners, disregarding the needs of the communities that worked and depended on the land.

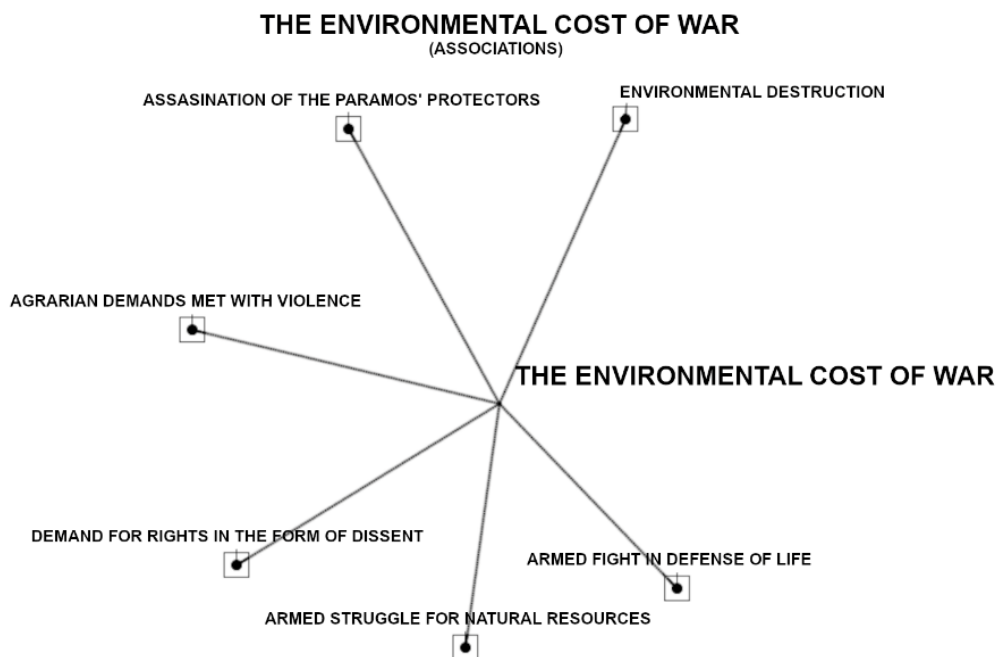
The next central category was “environmental costs of war”. The interviewees not only mentioned material damage and devastation of cities and towns but also referred to the loss of human lives and natural resources such as land and biodiversity. They also mentioned the social costs, such as orphans, widows, and people who had lost their homes and livelihoods. Additionally, it was highlighted that war generated environmental and social costs. For example, the interviewees stated:

The armed struggle or war, at a certain moment, was necessary to defend life and natural resources since the government responded to the demands with violence and often attempted to annihilate people to prevent them from demanding their rights. In this sense, the emergence of armed organizations was not an offensive measure but a form of dissent. For example, how can an adequate environmental policy for the Artemisa plan be considered if social leaders protecting the moorlands have been killed? (P2).

The war brought high costs, especially the loss of human lives and natural resources that enriched us, such as land. At that time, it could be said that the human costs of the war outweighed the material losses. Although there was no physical destruction of cities and towns in Colombia like in other countries, where neighborhoods, schools, and hospitals were destroyed, there was a significant amount of environmental destruction (P4).

In Figure 3, the discussion about the cost of war focused on the environment being characterized as an invisible victim. Environmental justice was a demand of the war because combat was carried out in a degradation of the environmental conditions of the territories, involving the state, the army, and paramilitarism. This was related to the first-level codes: environmental destruction, armed struggle for the defense of natural resources, incoherence between environmental policy, and the protection of environmental leaders. This revolved around the questions: What was the concept of environmental justice held by the actors of the armed conflict? And what was the role of armed resistance in the defense of natural resources and what negative externalities did it produce?

Figure III: Words associated with environmental costs of war



Source: Own elaboration, based on results processed with T-lab. (2023)

The descriptors mentioned that in armed struggle, both the material and environmental costs were high, which could be interpreted as a weakness of that strategy of resistance and civil dissent. According to the interviewees, the confrontation with state oppression excluded practices promoting environmental sustainability. Alongside environmental threats, there were also threats to the life and the well-being of people, which became a human rights issue closely related to the situation.

The last central category was “environmental reconstruction and sustainable economy”, which was associated with the challenge of the Peace Agreement. Measures were established to protect the environment and natural resources, as well as to promote reconciliation and social justice. The reintegration of former combatants was achieved through locally based production that focused on protecting natural resources.

In repairing the damages caused by war and promoting sustainable development, the substitution of illicit crops and the adoption of sustainable agricultural practices were promoted through joint actions involving all stakeholders for responsible production of the environment. The primary related codes were: Peace Agreement and sustainable production, reduction of natural resource depletion, collective land ownership, defense of water, solidarity, economy, reintegration of ex-combatants, appropriate substitute for illegal drugs. These codes were related to the thematic pattern of “sustainable rural development in the face of ineffective public policies”. In continuation of the discussion, one interviewee stated: “After the Peace Agreement, cooperatives were established to improve production and local purchasing, as well as to promote the reintegration of ex-combatants” (P3). Others mentioned that:

During times of conflict, the FARC implemented measures to protect the environment and prevent the depletion of natural resources, in addition to fulfilling other requirements to avoid the exclusion of certain groups. In terms of land ownership, collective ownership was established to create common goods, such as the protection of the paramos, which were considered a common good. Likewise, the defense of water and its recognition as a common good were fundamental to guarantee sustainability.

At present, however, uncertainties and a lack of solid guarantees persist, causing unease in the nation. It is necessary to recognize and repair the damages in all areas and establish measures to protect the environment and natural resources, as well as to promote reconciliation and social justice in Colombia. The absence of an agreement to end the conflict will continue to hinder the country’s reconstruction and environmental preservation, generating concern and a sense of urgency to act (P5).

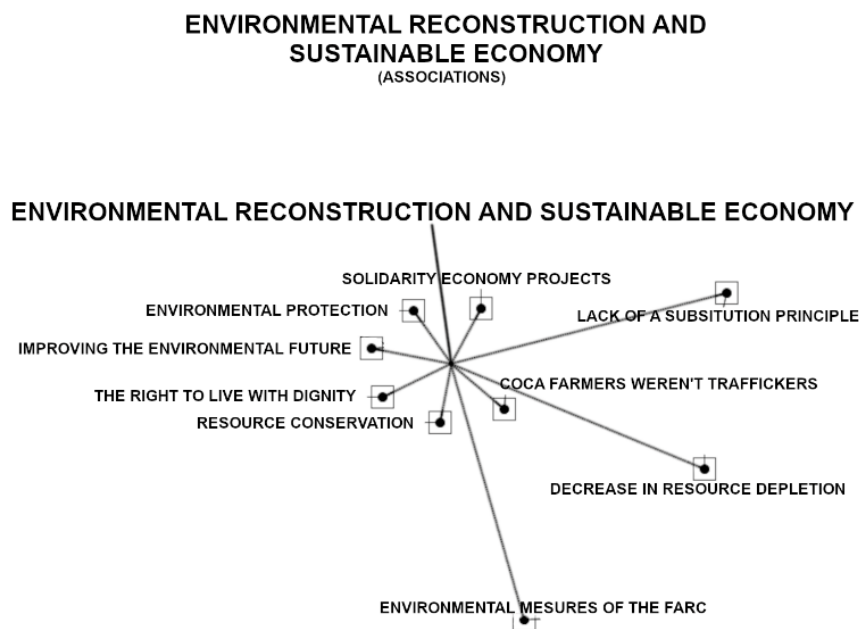
The previous interviewee also pointed out that Colombia has the potential to improve the country’s environmental future, but unpredictability regarding political plans and dependence on a sitting president, combined with political instability, creates uncertainty about the direction the nation would take in resource conservation. Another former combatant mentioned:

A farmer who cultivated one or two hectares of coca leaves barely had enough to eat. Therefore, these individuals were not drug traffickers, and they were left alone in cultivating an appropriate substitute for illegal drugs. It was a deceitful and a constant threat of “if it’s not replaced, it will be sprayed” or they will be forcibly removed from the land. Reconstructing the country will require implementing productive projects and organizing around the solidarity economy to remedy the damages caused by war and promote sustain-

able development. In the aftermath of the agreement, there were expectations and improvised actions by the state. A new agreement is needed to achieve reconciliation and progress in the country’s reconstruction. The war not only brought devastation, humiliation, oppression, famine, suffering, unemployment, and complete desolation. It is true that there has been discussion about the possibility of several animal species becoming extinct, but it is not enough to explain why fishermen could no longer catch sharks or why farmers could no longer grow coca. The solution is to let us do what we have known all our lives; we are being denied the right to a dignified existence (P4).

In Figure 4, the topic of transitioning from a war economy to sustainable economic activity was marked with discursive associations. In the similarity analysis, a distance was established between the word chain “environmental measures of the FARC” and the main topic of the descriptors. This occurred because it was an isolated comment based on a hypothetical proposal rather than executed action. In this scenario of conjecture, it was understood as an effort to address the depletion of natural resources by seeking guarantees of environmental responsibility in the context of a past armed struggle.

Figure IV: Environmental Reconstruction and Sustainable Economy



Source: Own elaboration, based on results processed with T-lab. (2023)

The above is related to the following questions: How could productive projects and organizations around the solidarity economy repair the damages caused by the war and promote sustainable development in Colombia? How could environmental and water justice in the country be ensured after the armed conflict? How could Colom-

bia guarantee a dignified existence for those affected by war and ex-combatants who were limited by government policies in their ability to make a living? What actions could be implemented to protect biodiversity and prevent the extinction of animal species in Colombia? What obstacles prevented the implementation of agreements to end the conflict and how could they be overcome?

Regarding the discussions, an approach was made to the theory of armed conflict. This indicated that armed wars were social processes that had repercussions on the environmental territory, with negative externalities transforming physical spaces. The internal armed conflict had people dedicated exclusively to the war business on each side. In addition to the casualty balance presented by the armed conflict, the impact on the social environment due to the deterioration of the environment was evident. In relation to this confrontation of non-sporadic violence, a direct and established challenge was presented to the economic, political, and social system of the country.

As a determinant of the origin of the war in Colombia, [Collier \(2008\)](#) concluded in his study of the roots of multiple armed conflicts worldwide that natural resources had directly contributed to the emergence of war. Influential elements included fauna, flora, biodiversity in general, material extraction, mineral exploitation, and land. However, it was not stated that the abundance of these elements was the sole reason ([Bannon and Collier, 2003](#)).

Among the most representative insurgent groups that endured over time in Colombia were the FARC, the National Liberation Army (ELN), and the M-19. It is worth noting that there were also other failed attempts to form guerrilla groups, such as that of Tulio, Bayer, and the Workers' and Communist Student Movement (Harnecker, 1988).

As a determining factor in the origin of the war in Colombia, the fight for land, the lack of political space for the participation of the population, and the confrontation between liberal and conservative political parties were presented. The concentration of wealth, high levels of structural poverty, and limited income generation in the rural population were also mentioned. The exploitation of natural resources was mentioned as one of the most influential factors, as mentioned by [Arias and Ibáñez \(2012\)](#), [Bejarano \(1986\)](#), [Goebertus \(2008\)](#), and [Sandoval et al. \(2017\)](#). These authors also pointed out that the production of monocultures was a cause of forced displacement, an element nested within the armed conflict.

In addition, drug trafficking contributed to environmental degradation and the increase in armed conflict, supporting paramilitary growth in the context of violence. Illicit crops had detrimental consequences on the biological diversity of the area. This altered primary forests and ecological niches, leading to soil erosion and the extinction of endemic species, among other impacts ([Bautista-Cespedes et al., 2021](#); [Hirst and Dalponte, 2021](#); [García, 2013](#)).

According to [García \(2005\)](#), the FARC focused on controlling and defending the territory in the Amazon region, as well as expanding coca cultivation and protecting drug trafficking routes. The FARC's dependence on the natural resources of the Amazon had a significant impact on the environment. This included deforestation,

the use of highly toxic chemicals in coca cultivation, and the contamination of rivers and other water sources. These negative externalities were further compounded by the fact that: “The biological diversity of the Amazon was also threatened by the conflict, as armed groups hunted and traded endangered species, causing disruption to ecological processes and habitat destruction, which led to species loss” (p. 66).

In line with this, [Hoddie \(2018\)](#) argued that the FARC insurgency, in order to finance the fight against the government, adopted unsustainable and highly destructive methods for the environment. This resulted in the degradation of vast areas of forests, rivers, and agricultural land. This was achieved through strategies of military exclusion zones against environmental threats, such as: “The FARC attacked oil pipelines to finance their insurgency and pressure the government. This contributed to the accidental or intentional release of oil into the environment, causing serious damage to aquatic life, vegetation, and human health” (p. 394) and “forced displacement, landmines, and movement restrictions in conflict areas disrupted traditional agriculture and led to the expansion of coca cultivation and other illicit crops” (p. 401).

3.CONCLUSIONS

In conclusion, this study has shed important light on the environmental repercussions of the armed conflict in Colombia and has provided a deeper understanding of the relationship between conflict and environmental degradation. Through the interpretation of general notions about conflict and the direct testimony of former FARC combatants, the negative impact of the conflict on the country’s natural environment has been clearly evident.

The interviews conducted with former FARC combatants have revealed how the presence of armed groups and activities associated with the conflict, such as deforestation, illegal mining, and water source pollution, have significantly contributed to environmental degradation in different regions of Colombia. These testimonies have provided a unique and valuable perspective on the practices and decisions that have led to the degradation of local ecosystems.

In the descriptors, the state was identified as responsible for the environmental degradation, as it was assumed that it had not protected the territory or responded to the demands of the resident population. There was also a lack of regulation of the relationships between territories and their inhabitants for the common good. However, there was also literature that expanded the responsibility for the emergence of negative externalities in the environment with the insurgency.

Furthermore, the economic context of land concentration in the country generated environmental uncertainty due to the improper use of land in extensive livestock farming. There was also an increase in greenhouse gas emissions without a strong response from the state. The degradation of natural ecosystems was related to river pollution, vulnerability of high-altitude moorlands (paramos), and the lack of care for flora and fauna.

A lack of responsibility on the part of actors to fulfill the Peace Agreement through a rural policy focused on environmental care was also identified. A scenario of promoting sustainable development in environmental care and common natural goods, supported by a solidarity economy and environmental responsibility, was proposed to remedy the damages in this area caused by the war.

The findings highlighted that the armed conflict has affected not only biodiversity and natural resources but also local communities that depend on them for their livelihoods. Environmental degradation has had a direct impact on the food security and the quality of life of these communities, creating a vicious cycle of resource scarcity and socio-economic difficulties.

This study emphasizes the importance of addressing the environmental repercussions of the armed conflict as an integral part of peacebuilding and sustainable development efforts in Colombia. Therefore, it is crucial to implement measures and policies that promote the conservation of ecosystems, restoration of affected areas, and the creation of sustainable economic opportunities for local communities. Thus, there is a call for the establishment of measures to promote environmental and water justice, supported by transparent and sustainable long-term political commitments. To achieve lasting peace and sustainable development in the country, it is crucial to comprehensively address these challenges and work on the implementation of strategies that promote environmental protection and the well-being of affected communities.

In light of the above, a future line of research is proposed, which involves assessing the specific environmental impacts in different regions of the country in order to identify the most affected areas and design context-specific mitigation and restoration strategies. Furthermore, it is suggested to delve into the analysis of compensation and environmental reparations mechanisms for affected communities, as well as the evaluation of economic and social costs associated with environmental degradation.

Additionally, the links between armed conflict, environmental degradation, and climate change could be investigated, considering the interaction of these factors and their possible long-term consequences. A holistic and in-depth understanding of these variables will allow for the development of more effective policies and strategies for risk mitigation and adaptation to climate change in the postconflict context. In summary, there is an invitation to continue exploring the environmental repercussions of the armed conflict in Colombia, as this will serve as a basis for establishing actions that promote the country's economic and social development, as well as achieving true environmental justice.

4. REFERENCES

- Arredondo, A. (2004). *Los crímenes ecológicos del narcoterrorismo en Colombia*. Bogotá, Quebor World.
- Bannon, I. and Collier, P. (2003). *Natural resources and violent conflict: Options and actions*. The World Bank, Washington.
- Bautista-Cespedes, O.V., Willemen, L., Castro-Nunez, A. and Groen, T. A. (2021). The effects of armed conflict on forest cover changes across temporal and spatial scales in the Colombian Amazon. *Regional environmental change*, 21 (3), 70. <https://doi.org/10.1007/s10113-021-01770-6>
- Bejarano, J. (1986). Efectos de la violencia en la producción agropecuaria. *Economía Colombiana*, (162), 5-23. <http://hdl.handle.net/11445/3242>
- Botero, L.D. (2021). Colombia y su proceso de neoliberalismo democrático autoritario. *Textos y Contextos*, 23, <https://doi.org/10.29166/tyc.v1i23.3313>.
- Calle-Rendón, B.R., Moreno, F., and Hilário, R.R. (2018). Vulnerability of mammals to land-use changes in Colombia's postconflict era. *Nature Conservation*, 29, 79-92. <https://doi.org/10.3897/natureconservation.29.28943>
- Centro Nacional de Memoria Histórica. (2018). *Sujetos victimizados y daños causados*. Centro Nacional de Memoria Histórica.
- Chambers, P. A. and Furio, V. J. (2017). Resisting Neoliberalism in Colombia: The Role of Human Rights. *Latin American Perspectives*, 44 (5), 127–144. <https://doi.org/10.1177/0094582X17699914>
- Collier, P. (2008). *El club de la miseria: qué falla en los países más pobres del mundo*. Mongabay.
- García, G. (2005). The environmental consequences of war: The Colombian Amazon and the FARC. *Journal of International Affairs*, 59 (2), 61-76. <https://doi.org/10.2307/24357930>.
- García, G. (2013). *El narcotráfico en Colombia: de las falencias de la política de prohibición y sus secuelas, a la discusión de la descriminalización y despenalización*. Pontificia Universidad Javeriana.
- Gutiérrez, F., Pinto, M., Arenas, J. C., Guzmán, T., and Gutiérrez, M. (2013). The importance of political coalitions in the successful reduction of violence in Colombian cities. *Urban Studies*, 50 (15), 3134-3151. <https://doi.org/10.1177/0042098013487779>
- Gutiérrez-Sanín, F. (2021). Tough Tradeoffs: Coca crops and agrarian alternatives in Colombia. *International Journal of Drug Policy*, 89, 103156. <https://doi.org/10.1016/j.drugpo.2021.103156>
- Hanson, T., Brooks, T. M., Da Fonseca, G. A., Hoffmann, M., Lamoreux, J. F., Machlis, G. and Pilgrim, J. D. (2009). Warfare in biodiversity hotspots. *Conservation Biology*, 23 (3), 578-587. <https://doi.org/10.1111/j.1523-1739.2009.01166.x>
- Hernández-Rodríguez, C., Ruiz-Ruiz, N. and Velut, S. (2022). Environmental crisis, food crisis and resisting fisherpersons. The case of the Magdalena River, Colombia, *Espace Populations Sociétés*. <https://doi.org/10.4000/eps.13155>
- Hernández G. de Velazco, J. J., Chumaceiro Hernández, A. C., Ziritt Trejo, G. Y., & Acurero Luzardo, M. T. (2018). Cultura para la paz en Colombia. Una aproximación desde las políticas públicas. *Opción*, 34(86), 612-641. Recuperado a partir de <https://produccioncientificaluz.org/index.php/opcion/article/view/23856/24300>
- Hirst, M. and Dalponte, B. (2021). *The latin american presence in post conflict Colombia*. Fiedrich Ebert Stifting.
- Homer-Dixon, T. (1996). The Project on Environment, Population and Security: Key Findings of Research. *Environmental Change and Security Project Report*, 2, 45-48.
- Hoddie, M. (2018). The environmental impacts of Colombia's FARC insurgency. *Journal of Peace Research*, 55 (3), 393-405. <https://doi.org/10.1177/0022343318755131>

- Lavaux, S. (2004). *Degradación ambiental y conflictos armados: las conexiones*. Editorial Universidad del Rosario.
- Libiszewski, S. (1991). What is an environmental conflict. *Journal of Peace Research*, 28 (4), 407-422. https://www.files.ethz.ch/isn/236/doc_238_290_en.pdf
- Medina P., Aguirre L. y Sarango A. (2017). La responsabilidad civil en la prevención del Medio Ambiente y sus ecosistemas: una mirada desde el derecho privado. *Universidad y Sociedad*, 9 (1), 173-177. <http://rus.ucf.edu.cu/>
- Negret, P., Sonter, L., Watson, J., Possingham, H., Jones, K., Suarez, C. and Maron, M. (2019). Emerging evidence that armed conflict and coca cultivation influence deforestation patterns. *Biological Conservation*, 239 (3), 108176. <https://doi.org/10.1016/j.biocon.2019.07.021>
- Observatorio de la Democracia (2021). *Informe Anual 2020: Democracia en América Latina: Hacia una ciudadanía de alta intensidad*. Capítulo 4: Estado y economía. Disponible en: <https://observatorio-democracia.org/estado-economia/>
- Ríos, J. (2018). From war to peace: Understanding the end of the armed conflict in Colombia. *Rationality and Society*, 30 (4), 463–490. <https://doi.org/10.1177/1043463118759672>
- Rodríguez, M. (2020). Environmental Degradation and Local Communities in Colombia: An Analysis of Socioeconomic Impacts. *Journal of Latin American Geography*, 19 (1), 99-121. Recuperado de <https://muse.jhu.edu/article/775336>
- Rodríguez-Díaz, R., Colino-Rabanal, V.J., Gutierrez-López, A. and Blanco-Villegas, M.J. (2021). Effect of Protected Areas on Human Populations in the Context of Colombian Armed Conflict, 2005–2018. *Sustainability*, 13, 146. <https://doi.org/10.3390/su13010146>
- Sandoval, L. E., Marín, M., y Almanza, A. M. (2017). Explotación de recursos naturales y conflicto en Colombia. *Revista de economía institucional*, 19(37), 201-225. <https://revistas.uexternado.edu.co/index.php/ecoins/article/view/5083/6616# citations>
- Salazar, A., Sanchez, A., Dukes, J. et al. (2022). Peace and the environment at the crossroads: Elections in a conflict-troubled biodiversity hotspot. *Environmental Science & Policy*, 135, 77-85. <https://doi.org/10.1016/j.envsci.2022.04.013>
- Stiglitz, J. E. (2002). *Globalization and its Discontents*. W. W. Norton & Company.
- Strauss, A. and Corbin, J. (2002). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. SAGE Publications.
- Vargas, Z. (2020). *Conflicto armado, medio ambiente y territorio*. Universidad Externado de Colombia. <https://medioambiente.uexternado.edu.co/conflicto-armado-medio-ambiente-y-territorio/>
- Zukerman, S. (2018). Determinants of ex-combatants' attitudes toward transitional justice in Colombia. *Conflict Management and Peace Science*, 35(6), 656-673. <https://doi.org/10.1177/073889421878808>

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The authors declare that they have no conflict of interest

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