Chapter 2

Impact of Illegal Mining on Sustainable Development Goals in Colombia*

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Abstract: This chapter examines the current environmental degradation caused by illegal mining (IM) in the Province of Chocó. It assesses the conditions of the riparian communities along the Atrato River and explores the impact of this crime on SDGs. Additionally, it highlights the efforts of the Military Forces, which works alongside these communities to protect the environment in the region. It is important to clarify that while IM may be viewed as a means of subsistence, it should not be conflated with the artisanal mining practices historically carried out by the Afro-Colombian communities living along the riverbanks.

Keywords: Chocó; Colombia; Military Forces; environment; illegal mining; SDG; Atrato River

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Introduction

This chapter analyzes the consequences of illegal mining (IM) on the Sustainable Development Goals (SDGs). The impact is reflected in the ecocide due to the exploitation of alluvial gold exploitation (EVOA, by its Spanish acronym), which violates the right to life of the riparian communities of the Atrato River. This phenomenon occurs in the country's rivers and directly affects the Afro-Colombian communities, which lack constant drinking water sources and must consume the waters of the rivers where these exploitations occur, preventing compliance with SDGs 1 and 6. The analysis will contribute to the discussion on ways to prevent and remedy the harm caused by IM in the Afro-Colombian community and the environment.

The SDGs reveal a reality in Colombia. Each region with a social problem linked to armed conflict, the transition from negative peace to positive peace, and the birth of new structural violence becomes a source for financing criminal organizations such as organized armed groups (OAG), whose multiplicity of illicit activities includes IM.

> Mining activities in rivers, both within their channels and in their vicinity—flood terraces and banks in general—produce multiple negative impacts on the natural processes of sediment transport and the health of the complex ecosystems they sustain and very significantly affect the way of life and the well-being of the communities settled there. (CRPC, 2028, p. 48)

Actually, open-pit mining makes it difficult for Colombia to meet the SDGs over time. Due to its resurgence, there is great concern about EVOA, as noted between 2018 and 2020. This was established in the report prepared by the Colombian

Ministry of Mines and Energy, the US Embassy in Colombia, and the UNODC in 2020, a perception that negatively impacts SDG compliance.

This exploitation paradoxically occurs in provinces where the greatest crisis regarding the SDGs occurs, according to the 2020 report. With 87 % of the national total, exploitation is highly concentrated in Antioquia, Chocó, and Bolívar. Likewise, the trend focused on the municipal level prevails: 98 municipalities show EVOA on land (out of 1103 in the country), and 10 concentrate 53 % of the total: Zaragoza, Nechí, and Nóvita lead the municipalities with 22,190 ha, which represent 22 % of the national total (UNDOC, 2020). The surface mining phenomenon directly impacts SDGs 1 and 6, and there is no evidence of improvement or tools to mitigate the problem in the population unrelated to mining and exploitation often carried out by outsiders in the region. In addition, mercury and cyanide are dumped in freshwater rivers for alluvium mining using dredgers, dragline excavators, and suction pumps.

Colombia's purpose of ending multidimensional poverty and ensuring drinking water consumption has revitalized a sector of the State. Globally, the 2030 Agenda has been considered to need urgent compliance. Colombia's efforts are not few. In 2015, the SDG Commission was created to implement the SDGs with prospective planning methods that guarantee the inclusion of socio-environmental and economic matters in sustainable development programs or activities (Decreto 280 de 2015).

The creation of the Commission attempted to integrate all of the State's public policy to avoid differentiated scales between the progress of provinces. However, in a diverse country like Colombia, this research finds that, although progress in percentage equality was sought, the same diversity of provinces that make up the national territory prevents progress in equality percentages. Regarding the SGDs subject to this investigation, we recognize that they are even more ambitious to achieve since crime prevents so.

Ruling T-622/2016 and Problem

What is the negative consequence of IM for the SDGs, and how is the right to life of the Afro-Colombian communities in Atrato violated? The problem of these fundamental water sources for Chocó and its Afro community is that in Colombia, the Constitutional Court issued Ruling T622/2016, calling on the State to combat IM. Still, its basis was the care of the Atrato River, designating it as a rights-holder, representing a crucial case law advance for its conservation and tackling pollution.

By Decree 1148/2017, the Presidency of the Republic appointed the Ministry of Environment and Sustainable Development as a legal representative. It formed a collegiate body of guardians[1] under the Guardian Commission, comprised of a government representative and another from the communities.

This ruling establishes a precedent that urges the Colombian State to take concrete actions to prevent and halt the decline of water sources essential for the survival of entire communities. However, the measures implemented by the State appear insufficient, as the IM activities damaging the Quito and Atrato rivers continue to escalate systematically. Although the government's efforts have not been negligible—evidenced by a national initiative calling on various sectors and ministries to collaborate in saving the Atrato River—they still seem inadequate.

The current administration has diligently upheld the ruling regarding gold exploitation. However, the extraction of gold from the region's rivers has led to deoxygenation. Increased mercury production in the Chocó rivers has resulted in significant environmental problems, adversely affecting the health of local inhabitants who rely on gold mining from these water sources for their livelihood. The consequences of the relentless pursuit of gold have been visibly reflected in the health of those who engage in this activity daily.

It is essential that the ruling from 2016 is implemented before the degradation of the Atrato and Quito rivers progresses further, as this could lead to irreversible environmental damage for the area's inhabitants. The innovative aspect of this ruling lies in its ecological approach, which prioritizes the environment to protect both the Atrato River and the riverside communities. This ruling places ecology at the forefront:

> The Chamber structures its analysis based on the case's complexity, resorting to the framework of the fundamental right to water, the protection of nature, food security, the physical, cultural, and spiritual survival of ethnic communities, and territorial and cultural rights. In its journey, and as a guide for the decision of this Ruling, the Court: i) addresses two cross-cutting concepts: ecocentrism and biocultural rights; ii) connects the protection of biodiversity and biocultural diversity with 24 international instruments and with the case law of the Constitutional Court; iii) focuses its analysis on the fundamental right to water, the right to food, and the territorial and cultural rights of ethnic communities; and then iv) establishes a framework of understanding of two essential principles: prevention principle and precautionary principle. (Gómez, 2020, pp. 23–24)

[1] Made up of 14 representatives of seven community organizations.

Regarding the problem affecting water sources of critical importance for that area of the country, the results of applying this ruling will be reflected in overcoming multiple issues aggravated by large-scale mining activity without legal authorization. The author of this investigation interviewed William Klinger, director of the Environmental Research Institute of the Pacific (IIAP, by its Spanish acronym), about the reason that led the Court to make the ruling:[2]

> T. G. Rodríguez M.: How or from what perspective does the IIAP see the environmental damage this crime causes to our Afro communities in Chocó?
> W. Klinger: I want to start by saying that most of the information provided by the communities that filed an action for the protection of collective rights that gave rise to the 2016 ruling was collected by the Institute through research. I particularly remember two robust investigations in the Quito River, one related to forest degradation and another to the mercury in fish, an element of the food chain that could result in human mercury exposure. We found mercury in 100 % of the fish and above the permissible exposure limit in more than 50 %. I think that the whole process started there. In addition, we had shown how feces contaminated the river, especially organic waste that went into the river without any prior treatment. Therefore, our research has focused on knowing the current state of the existing ecosystems in the territory, its causes, and the type of remediation that can address such causes and restore degraded ecosystems. From this perspective, using a participatory methodology that involved the main mining stakeholders, we undertook the research processes without ignoring that this activity had historically contributed to the material growth of the population. These processes led us to be part of the advisory bodies of the ruling and to draw up action plans with the Ministry of Environment for Order 5, which has to do with environmental issues, and with the Ministry of Agriculture for Order 7, which deals with production problems for food security while respecting the biocultural rights of the population.

The Colombian State committed to complying with the ruling. However, it is also a matter of the inhabitants, who must play an active role in this achievement since they were the ones who ensured that their rights were protected. As this ruling was a historic event, being the first of its kind issued by a judge in Colombia, the author of this investigation interviewed Darío Blandón Caicedo, regional director of the Administrative Department for Social Prosperity (DPS, by its Spanish acronym) in Chocó, to verify compliance:[3]

[2] Personal interview, Thursday, May 26, 2022.

[3] Personal interview, 2022.

> T. G. Rodríguez M.: Is the ruling that granted rights to the Atrato River being complied with?
> D. Blandón C.: We should consider several elements. The ruling is not being complied with; national entities are not the only ones obliged. Territorial entities should not be forced. No more training is needed; communities are saturated with training. We need those resources that the Ministry of the Interior has… those many resources go to Black and Palenquero communities, to Indigenous communities. No more training; we need the regulations to be verified and the resources used for producing and planting. Apart from the Military Forces and the Prosecutor's Office organizing security, those resources are needed to grow crops. Until now, this money goes to the Atrato River, and people are worn out, resources are lost, and illegal mining continues. We must begin by saying, "No more strengthening meetings," but rather strengthen the farmers to plant again. Let the communities start producing again. The Victims Unit, the Ministry of the Interior, the Ministry of Agriculture… These strengthening meetings are total corruption; they are useless. I'm told: "Director, we don't want any more meetings." The Presidency convenes a meeting with the Ministry of the Interior and solves everything with the "strengthening." What would Chocó be without the presence of the Military Forces? The presence of Brigade 15 and Titan Task Force is terrific. Without this institutionality, Chocó would be an unviable region, mutating into a failed province. The Military Forces and the Police are the most critical institutions that Chocó has.

The official makes it clear that the work of the Ministry of the Interior, which is responsible for the State's enforcement of the ruling, needs to be corrected since it is not aimed at what the Court sought. The preservation of water sources, including the Atrato River, has, until now, been in the hands of the Military Forces, which has guaranteed the survival of vital water sources to fulfill SDGs 1 and 6 through reforestation and elimination of coca plants. The inhabitants must have the tools to participate directly in environmental conservation.

In addition to the social problems evident in the province, other factors arising from the degradation of water sources have to do with the health of the inhabitants. IM uses other minerals to extract gold and platinum, which are indiscriminately causing diseases in the population. Without distinguishing age or sex, the diseases arising from this illegal activity are increasing. If the population continues to depend on this activity, the province will be doomed to a health crisis, as the regional director states:

> T. G. Rodríguez M.: What is the health condition of the Afro-Colombian communities? Is illegal mining affecting the population in this regard?
> D. Blandón C.: I will tell you something, so don't be scared. Sit tight: "The health situation is dire." We have people with mercury in their blood. Many of my friends have to go to Medellín for treatments because the material used is deposited in the San Juan, Atrato, Andagueda, and Quito rivers, the latter being one of the most affected. People have mercury in their blood, and many have died from it. Some mercury is used for washing; the rest goes into the rivers. The fish become contaminated; the natives feed on the fish and become contaminated. Many people die of cancer because of this. The problem is serious now; the only secondary care hospital, San Francisco de Asís, is in Quibdó and was taken over by the Government... Corruption is rampant. People must go to Medellín and Pereira for medical treatments, and most people, ordinary people, must suffer the inclemency of a government-controlled hospital. It's been four months since the strike started. There are no supplies. Mortality is high, and there are many cases of cancer due to mercury, the material used to extract gold. All this material damages the rivers, and fish are contaminated by burned fuels already used. The farmer gets paid some money to help in such mining. Then, with that money, the farmer buys fish to eat. It's a conscious-unconscious suicide. It's a chicken and egg situation.

Accordingly, the health crisis is expected to increase. The situation of the population could be different if they returned to the commercial and agricultural activities that the province had been carrying out for decades. The Ministry of the Interior's programs cannot continue to be reduced to continuous training. We must also insist that with the willingness of the province's population, it will be possible to overcome the situation.

2021 EVOA Report

The report *Colombia. Alluvial Gold Exploitation. Evidence from Remote Sensing 2020* (UNODC, 2021) found that the situation is not improving; on the contrary, it declines each year compared to the previous one.

> In the analysis of the 2020 national consolidated report, 69% (69,198 ha) of EVOA corresponds to illegal exploitation. Chocó and Antioquia stand out in this category, with 43% and 29%, respectively, of the national total for the category. Twenty-four percent (24,677 ha) have technical and environmental

> permits, and Antioquia holds 78% in this category. Finally, the remaining 7% is in transition to legality (6,876 ha). Chocó and Antioquia once again stand out in this category, with 51% and 26%, respectively, of the national total for the category. The provinces of Valle del Cauca, Guainía, Caquetá, Putumayo, Córdoba, Cauca and Chocó have more than 80% of their EVOA on land in the illegal exploitation category. (UNODC, 2021, p. 42)

According to the report, Chocó and Antioquia remain at the top of provinces where EVOA exists in high percentages. As confirmed by visual inspection during fieldwork in Chocó and Bajo Cauca (Antioquia), there is an excessive growth of mining ponds where soil removal and outcropping occur. This exploitation is not alien to the damage caused by IM in rivers since it is conducted in river beds. Environmental damage is not significantly different from one another either since soil removal and deforestation are essential parts of the ecological damage caused by both types of mining.

The remote sensing tool used to obtain this United Nations report allows for a more global view of environmental damage and its dimensions. The figures provided are highly credible since the tool was implemented to obtain environmental results. Thus, the implementation of solutions could yield more and better results.

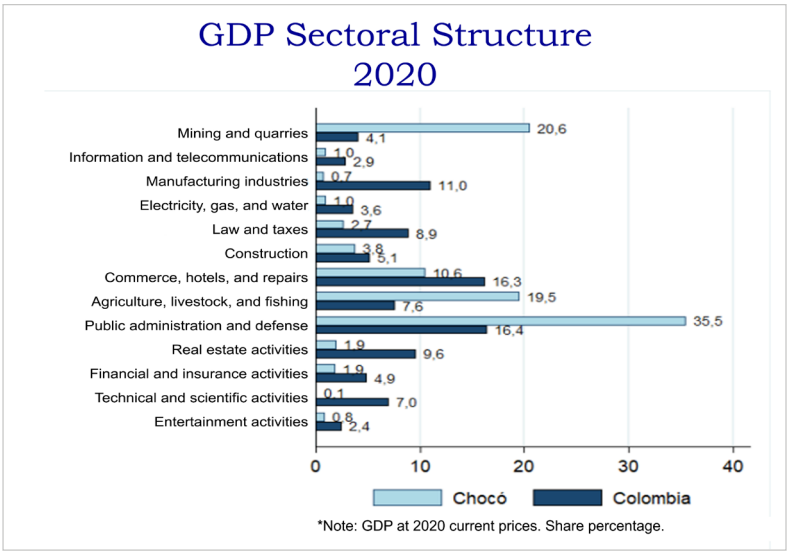
> Through remote sensing tools, the monitoring model covers the detection of evidence of alluvial gold exploitation (EVOA). That is, evidence of exploitation in secondary deposits with machinery used to initially extract the material. In this context, it is necessary to specify that the type of evidence depends on when and how mining is performed. For mining developed in alluvial landscapes with machinery on land (backhoes), the evidence is characterized by changes in the surrounding landscape related to alterations in bodies of water, deforestation and the degradation of soils, among others. On the other hand, for mining in water with machinery, mining performed directly in water flows using dredges or settling basins leaves evidence based on the alteration of suspended sediments, which are detected through spectral indices. (UNODC, 2021, p. 25)

SDG 1 and Compliance by the Military Forces

To explore the poverty situation in the province, it is necessary to review some general aspects that the State has been working on as a result of what has materialized there during the last decades and taken root despite the presence of the State. However, this research confirmed through fieldwork that poverty in the

Chocó riverside areas is directly related to the arrival of criminal actors who have displaced the Afro-Colombian population from one of their historical livelihoods: ancestral mining. This activity is cross-cutting in the life of the Afro-Colombian communities in that area and, therefore, when they are displaced by outsiders who threaten and dispossess them, achieving SDG 1 is practically impossible in the medium term.

Figure 1. *Labor Market Activities*



Source: DANE (2024).

As shown in Figure 1, mining in the province far exceeds that in the rest of the country, where legal mining is mainly performed. IM has taken over the labor market; the regional director states that it is owing to the ease of obtaining cash. Due to their delay in bearing fruit, the residents have left aside basic food crops for subsequent sale.

Every four years, the relevant administration releases its National Development Plan (PND, by its Spanish acronym), which disaggregates investment for each province. No province or area of the country can be left out. Now, it is the responsibility of local authorities to distribute resources to reduce poverty, which in recent years has been the most crucial objective of each administration.

The share of Chocó in national finances has been meager, amounting to 0.45 % (MinComercio, 2024). Poverty in this province results in a GDP per capita of USD

2,277 (DANE, 2024), which indicates that a person in Chocó lives with just over USD 2.00. In addition, its inhabitants are subjected to an illegal activity that condemns them to a disease but brings them cash almost immediately after extracting the product from rivers. This province is going through a true environmental, economic, and health emergency.

Poverty is not the cause of crime, and there is no objective data to prove it. In the past, when economic opportunities and fields of action were scarce, there was a reason to swell the ranks of illegal groups. However, this is not the case today, either in Colombia or in Chocó, although there may be certain levels of extortion, theft, kidnapping, or membership in illegal groups. When the National Army, in fulfilling its legal duty, renders the machinery for the illicit extraction of gold and platinum useless, the residents who make a living from it start to commit these crimes (Table 1).

Table 1. *Crimes and Captures in Chocó, 2020*

Robbery	16
Bike jacking	12
Mugging	62
Burglary	9
Extortion	47
Damage to third-party property	7
Child exploitation	1
Subtotal	**154**

Source: Policía Nacional (2020).

Although Chocó is surpassed in these statistics by other provinces, such as Antioquia, Atlántico, Cesar, Cundinamarca, and La Guajira, these are more populated and have vastly different economic activities. Regarding the Military Forces' participation in the PND and how it is materialized in achieving SDGs, ending poverty is part of its functions. Of course, Chocó is not excluded from this initiative that goes hand in hand with the Military Forces.

The Defense and Security Policy encourages the insertion of multiple sectors, mainly due to the complexity of emerging threats and their surrounding network system in the international scene, where they also have minions (Barrero, 2020). It is a joint effort between state institutions to achieve economic recovery to overcome poverty. We insist that Chocó is not excluded from this. Reducing poverty in this area involves the national government and the local government firsthand. Therefore, the participation of the Alto Baudó mayors is vital.

Innovation is the field of development of ideas for new generations. For the present and future of Chocó, we must foster, promote, invest, and develop the economy, society, and the individual as a fundamental stakeholder. Despite everything, great, small, and even emerging powers have limited their future development to this sector of the economy, implying trust in the individual, especially in their creative capacity, in the way of assimilating failure and overcoming it, and in becoming successful. Different companies exist, including microenterprises (home-based businesses) and small companies covering a market niche but not growing outside of it. These companies can create jobs that keep residents away from IM.

While the national government has recognized natural resources as "strategic assets of the nation," the effort to preserve them calls upon us all. Their recovery, restoration, and promotion should not entail the impossibility of exploiting them. In Chocó, it must be done not only from the perspective of charging individuals with a crime for carrying on an economic activity. The State is heading toward designing a sustainable economic security plan for this province. Since it is a critical area of national interest precisely because of its wealth, leaving it at the bottom of the initiatives is not the most advisable way to escape poverty. There are essential steps to take, and the Military Forces must be part of them.

Institutional commitment to environmental security demonstrates disengagement, especially when resolving fundamental problems. State institutions must pursue alternative conflict resolution mechanisms in all their actions, such as access to vital resources, sustainable development, citizen security, and justice (González, 2020).

Given the diversity of its forces, the defense sector could contribute the most to innovation in Chocó. Therefore, it would be the most robust platform for the country to develop and obtain results in this matter. Using armies as a source of innovation is not new; this has happened since World War I. The experience acquired by Colombia during the entire internal conflict reflects what soldiers, non-commissioned officers, and officers have learned in various internal sectors of the Military Forces. Innovations from the military sector should be fundamental for the country's development, job recovery, and economic growth within the territories.

SDG 6 and Compliance by the Military Forces

The participation of the Military Forces and the Police as leading actors in the prevention, protection, recovery, and sustainability of the environment allows

Colombia to advance this issue. The support of domestic legislation is also an essential means to achieve progress. The fight against the destruction of the environment in the country is not new. Two decades ago, Colombian legislation classified this conduct as a crime in the Code of Criminal Prosecution § 164, with sentences between ten and fifteen years in prison as well as fines between 5,000 and 30,000 monthly minimum wages for those who, under the internal conflict, use methods or means against the environment and cause severe, extensive and lasting damage (CPP, 2004).

Nonetheless, as this crime expanded throughout the national territory and became one of the primary sources of financing for residual organized armed groups (rOAG), governments needed to go further and form a Brigade Against Illegal Mining. Today, the Titan Task Force operates in Bajo Cauca, Antioquia, the Area of Operations of the 7th Division of the National Army. Permanent Directive 004/2017 provides functions for the institutions part of this brigade and gives particular instructions (Table 2).

Table 2. *CGFM: Illegal Mining*

Coordinate security with the National Police for operations against IM and related crimes. The relevant coordination protocols will be established and shared for these purposes.		
Contribute to information exchange mechanisms to launch operations against IM and related crimes.		
According to its duties, the CGFM Weapons, Ammunition, and Explosives Trade Control Department (DCCA) will:	1.	Control explosives and accessories that may be diverted or produced for IM activities and related crimes.
	2.	Together with the Chiefs of Staff of Territorial Brigades, inspect explosive storage facilities within brigades, battalions, and private company magazines. These must be verified as provided in current regulations. For these purposes, a scheme of scheduled and unscheduled reviews will be established for companies in prioritized areas.
	3.	Control the delivery of explosives to individuals or legal entities with legal authorization to use them for industrial purposes. Military Industries (INDUMIL) will coordinate the marking, numbering, or special emblems to control the quantities for use. A file recording the quality, characteristics, and percentage of use of such materials must be implemented.
Make the necessary arrangements for the National Army and the National Navy to check for compliance regarding heavy machinery transport on the roads and waterways for which they are responsible.		

Submit a report to the MDN and the Public Security and Infrastructure Division on the minerals seized to date by the Military Forces in operations against IM and related crimes. This report must contain the location, date of seizure, and authority responsible for safeguarding the mineral, among others. The same applies to seized machinery and precursor inputs in IM.
Design an action protocol for the Military Forces regarding the seizure of minerals in operations against IM and related crimes.
Submit a semiannual report to the MDN and the Public Security and Infrastructure Division on the minerals seized by the Military Forces in operations against IM. This report must contain the location, date of seizure, and authority responsible for safeguarding the mineral, among others. The report and the seizure process must be audited by a firm external to the Colombian Military Forces. The same applies to seized machinery and precursor inputs in IM.
Support, according to its jurisdiction, the work of the National Police and administrative authorities.

Source: Own elaboration based on MDN (2017).

During the last two administrations, Colombia made legal progress in prosecuting this and related crimes. Thus, the National Development Plan 2014–2018 legally initiated the fight against this crime by the Colombian State, which is why the Brigade Against Illegal Mining (BRCMI, by its Spanish acronym) was created, becoming an organic part of the National Army (Provision 0013 of September 11, 2015 issued by the Army Command), approved by CGFM Provision 043 of October 19, 2015, and MDN Resolution 9925 of November 3, 2015 (EJC, 2016).

Regarding SDG 6, *Ensure access to water and sanitation for all,* there are not enough water resources to make sure it is met. In Colombia, this is not the reason for environmental degradation, quite the opposite. Colombia is rich in water resources. The problem lies in the exploitation by aggressive means that pollute rivers, making it impossible to obtain drinking water from them and even perpetuating extreme poverty in remote regions of the country. There is also the cost of returning the environment to its initial state, i.e., the cost of environmental recovery for each restored area, and the accessibility to these areas since they are generally in the power of rOAG. Thus, the Military Forces are responsible for the life and physical integrity of the residents of these population centers. The effort and commitment that this work entails on the State's part is not minor; on the contrary, it builds up complex environmental expectations to fulfill.

> The participation of the Military Forces in environmental tasks has a long history in the country. It was embodied in Article 103 of Law 99/1993 (General Environmental Act), which determined that the Armed Forces (as the Military

> Forces were formerly known) would protect the environment and renewable resources to defend national sovereignty. The need for security forces to support control and surveillance in mobilizing, processing, using, exploiting, and commercializing renewable natural resources was pointed out (§ 64 and 65). This link has become increasingly deeper […] This policy defined, among other actions, that the Military Forces and the Police would support the National Environmental System (SINA, by its Spanish acronym); conduct scientific research to create knowledge about preserving the environment in maritime, river, terrestrial, and aerial scenarios; harmonize the infrastructure projects of the Defense sector with land use planning instruments and environmental management plans; and support actions to eradicate illicit activities in the country's ecosystems. (FIP, 2020)

To guarantee SDG 6, the Military Forces has BR 15 as the Area of Operations of the National Army in Chocó. It is territorially charged by Colombian law with preventing, preserving, and promoting the sustainability of water sources in that area. Among these water sources is the Atrato River. In a visual inspection, the author of this research identified the need to preserve this river since it is the "main road" of riverside communities. The Atrato River is a source of employment due to artisanal mining and the route that connects the population centers with the rest of the area.

The continued presence of security forces guarantees mobility through this water source, the region's main "highway." The security problems resulting from the IM are a considerable challenge for the State today. The National Army oversees operational efforts to combat IM through military and social strategies, consolidating them each time new intervention structures are identified. Such social strategies focused on production projects and inter-institutional relationships are being strengthened in Chocó, becoming a perspective of interest for the military institution and the province (Mejía, 2020).

Concerns about environmental degradation by the State in the last decade lie not only in IM and how it is performed but also in the difficulties of reversing the environmental damage caused, since it is incalculable, especially IM, which affects soil and water sources, as in some provinces. In 2020, the Police's Anti-Narcotics Monitoring System (SIMA, by its Spanish acronym) managed to detect approximately 6,330 points of EVOA, with the most impacted provinces being Chocó (40,780 hectares) and Antioquia (35,581 hectares), where damage is irremediable.

Defense Sector, the Guarantor of the Environment in Chocó

In Chocó, BR 15 has jurisdiction and is responsible for ensuring the safety of the communities in the area. It is also responsible for preventing, preserving, and sustaining the environment. In conjunction with the Marine Corps and the National Police, among other institutions legally in charge of preventing serious and irreversible environmental damage in the face of risk, according to the MDN, even if there is no scientific certainty about its occurrence.

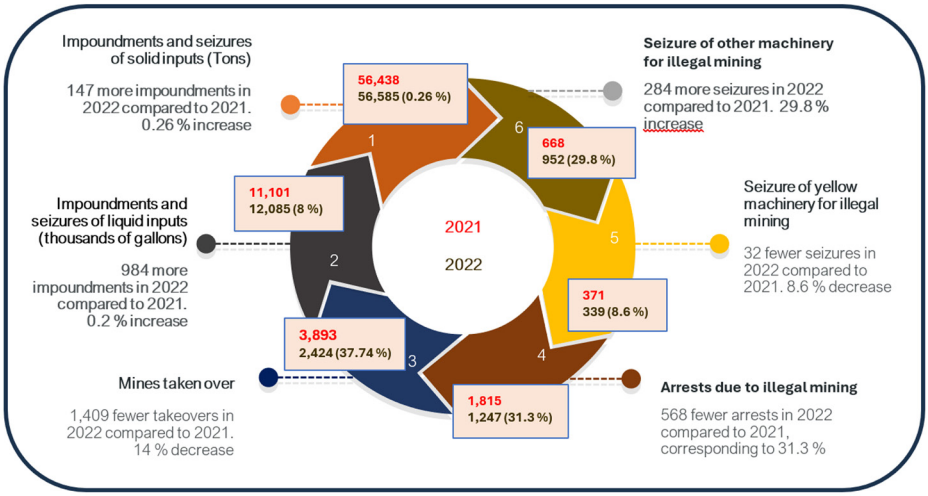
Environmental policy from the Defense sector is relatively new. However, it has developed rapidly, thanks to the commitment of the Colombian State to this matter. Regarding the Seventh Division, which, in this case, exercises jurisdiction over the province subject to this investigation, we verified, through fieldwork, the work it performs to protect the environment. The campaign began with Operation Artemisa to preserve water, natural resources, and everything related to biodiversity and has become a permanent agenda, including the deployment of joint, coordinated, inter-institutional, and multinational operations for its defense in protected areas (FF. MM., 2019, p. 18).

Colombia's efforts in environmental matters have been ambitious if we consider the challenge of stopping the degradation of both land and water ecosystems due to various criminal activities that materialize in Colombian territory. From drug trafficking in its beginnings to today's IM, the responsibility of the Colombian State in this matter is not small as one of the countries with the most remarkable diversity, and achieving objectives should be accelerated in public policy. Thus, in 2020, the MDN announced the creation of the Environmental Task Force to address the severe damage and serious violations that organizations such as OAGs perpetrate against water, all biodiversity, and the environment (FIP, 2020, p. 6).

The participation of the Military Forces and the Police has been fundamental in preventing and restoring environmental damage and in arresting criminals who constantly seek to benefit from crimes that harm the ecosystem. Results are delivered daily since the enormous wealth in Chocó, as in other areas of the coastal population in the Pacific, means that the interests of actors engaged in organized crime are always present. To mention just one of the results in April 2022, the 16th Marine Infantry River Battalion—assigned to the Joint Task Force Titan—and the National Army seized wood derived from deforestation, in Chocó and Antioquia. In just three days, they seized 147 cubic meters of wood (CGFM, 2022; Kienyke Regiones, 2022).

Thus, the Defense sector in Chocó is a primary guarantor of the environment against crimes directly related to IM and those concatenated with it in causing the environmental degradation of that area. Colombia's commitment to meeting the SDGs, in particular, 1 and 6, seems to be increasingly more profound in the sense of further protecting the environment. The operations then move on to a phase of permanence, thus becoming public policy. According to MDN (2022), Artemisa has turned into a permanent, comprehensive, and sustained campaign of security forces from the very issuance of Directive 008 on March 23, 2022. Nationwide, for example, significant progress has been made in the fight against IM, which is a factor in the pollution of water sources and deforestation, among others (Figure 2).

Figure 2. *Fight against Illegal Mining (2021–2022)*



Source: Martín (2023).

With Artemisa, the 59 National Natural Parks (NNPs) and the 62 Protected Areas in Colombia will be monitored by the Army and the National Police in coordination with the Division of Mounted Police and Rural Security. Thus, Colombia is tasked with building and expanding its capacity to maintain the viability of the country's natural ecosystem, making it one of the most important in the world. Nature in Colombia is a critical "asset" for the survival not only of natural species but also of the populations that live in areas targeted by organized crime and suffer the consequences of illicit activities.

Conclusions

In Colombia, there are delays regarding the fulfillment of SDGs 1 and 6. Usually, a country without organized crime can meet such goals promptly. However, in our case, the stagnation of crime and, in some cases, its increase will prevent the country from ending multidimensional poverty and guaranteeing drinking water in the areas delimited for this research. EVOA, instead of decreasing, has increased, as observed in the UNDOC report, according to which it grew by 10 % from 2019 to 2020.

The Military Forces' and Police's work is insufficient in light of the number of crimes committed by the rOAG in Chocó, on the margins of the riverside territories of that area. As this research confirmed, the accentuation of the sand banks caused by the removal of sand accounts for the sedimentation experienced by the Atrato River and other tributaries in Chocó. Similarly, the State's presence, limited to the Military Forces and the Police, restricts the potential for sociocultural and economic progress within the Afro-Colombian population.

Expanding protected areas in the country to reach 30 % of the territory does not guarantee environmental sustainability in the coming decades. Achieving the SDGs will be challenging due to various factors that hinder progress. As a result, the outcome of the 2030 Agenda for Colombia is expected to be negative. It is crucial for the State to consider the involvement of Chocó's civilian population in protecting the environment, as their participation could significantly enhance the prospects of achieving the SDGs addressed in this research.

References

Armada de Colombia. (2022, April 19). *Armada de Colombia y Ejército incautan 129 metros cúbicos de madera en Chocó y Antioquia.* Comando General Fuerzas Militares de Colombia. https://n9.cl/wf8n1

Barrero, B. D. (2020). El desarrollo sostenible en el marco del Plan Nacional de Desarrollo y la Política de Defensa y Seguridad Nacional. In C. D. González (Ed.), *Contribución del Sector Defensa Nacional de Colombia al Cumplimiento de los Objetivos de Desarrollo Sostenible (Agenda 2030)* (pp. 85–111). Planeta. https://doi.org/10.25062/9789584292919.03

Código de Procedimiento Penal [Ley 906 de 2004]. (2004, August 31). Colombia.

Comando General de las Fuerzas Militares (CGFM). (2021). *Informe campaña Artemisa.* https://n9.cl/pyughx

Comunicación Sectorial & Ministerio de Defensa Nacional (MDN). (2020, February 25). *Mindefensa anuncia creación de Fuerza de Tarea de Protección Ambiental* [Video]. Comando General Fuerzas Militares de Colombia. https://n9.cl/k4uhz

Corte Constitucional de Colombia. (2016, November 10). *Sentencia T-622 de 2016* (M.P. Jorge Iván Palacio Palacio).

Decreto 280 de 2015. (2015, February 18). *Por medio del cual se crea la Comisión Interinstitucional de Alto Nivel para el alistamiento y la efectiva implementación de la Agenda de Desarrollo Post 2015 y sus Objetivos de Desarrollo Sostenible (ODS).* Diario Oficial No. 49 429.

Decreto 1148 de 2017. (2017, July 5). *Por medio del cual se designa al representante de los derechos del río Atrato en cumplimiento de la Sentencia T 622 de 2016 de la Corte Constitucional.* Diario Oficial No. 50 285.

Departamento Administrativo Nacional de Estadística (DANE). (2024). *PIB por departamento.* https://n9.cl/in5yk1

Departamento Administrativo para la Prosperidad Social (DPS). (2022, April 8). *Entrevista a Darío Blandón. Director del Departamento de Prosperidad Social Regional Chocó* [Video]. Facebook. https://n9.cl/eoyrh

Ejército Nacional de Colombia (EJC). (2016). *Disposición 0004 de 2016: Por la cual se reestructura el Ejército Nacional, se aprueban sus Tablas de Organización y Equipo (TOE) y se dictan otras disposiciones.* https://n9.cl/w5hxi

Fundación Ideas para la Paz (FIP). (2020). *Fuerzas Militares y la protección del ambiente: Roles, riesgos y oportunidades.* https://n9.cl/721mi

Giraldo Bonilla, H. F., & Cabrera Ortiz, F. (Eds.). (2020). *Estrategia contra la extracción ilícita de yacimientos mineros 2020 2030.* Sello Editorial ESDEG. https://doi.org/10.25062/9789585254596

Gómez, I. M. (2020). *El río Atrato como sujeto de derechos y el constitucionalismo transformador* [Master's thesis, Universidad Externado de Colombia]. https://n9.cl/dxfz5z

González Cuenca, D., Montes Ramírez, A. M., & Idrobo Velasco, J. A. (2020). La política de defensa y seguridad nacional en Colombia: Análisis de condiciones sostenibles para el desarrollo social. In C. D. González (Ed.), *Contribución del Sector Defensa Nacional de Colombia al Cumplimiento de los Objetivos de Desarrollo Sostenible* (Agenda 2030) (pp. 135–161). Planeta. https://doi.org/10.25062/9789584292919.05

Mejía, L. C. (2020). Explotación ilícita de yacimientos mineros y su relación con la pobreza en Chocó, Colombia: Estado actual y desafíos para el Ejército Nacional. In Z. P. Sierra (Ed.), *Perspectivas en derechos humanos y derecho internacional humanitario para el Ejército Nacional de Colombia* (pp. 186–222). Miles Doctus. https://doi.org/10.21830/9789585287884.08

Ministerio de Comercio, Industria y Turismo (MinComercio). (2024). *Perfiles económicos y comerciales por departamentos.* https://n9.cl/ow4d9d

Ministerio de Defensa Nacional (MDN). (2022, June 10). *Ministro de Defensa anuncia que la 'campaña Artemisa' es ahora permanente, integral y sostenida.* https://n9.cl/luhp3

Observatorio Pacífico y Territorio (OPT) & Coordinación Regional del Pacífico Colombiano (CRPC). (2018). *Impactos de la minería en el Pacífico colombiano.* https://n9.cl/pgmknb

Policía Nacional de Colombia. (2020). *Tablas estadísticas de actividad operativa 2020.* Policía Nacional de Colombia.

United Nations Office on Drugs and Crime (UNODC). (2021). *Colombia. Alluvial Gold Exploitation. Evidence from Remote Sensing, 2020.* https://biesimci.org/fileadmin/2020/documentos/evoa/informe_evoa_2020_-_inglés.pdf