

A VIEW OF INTERAGENCY OPERATIONS IN SOUTH AMERICA IN THE FACE OF ILLEGAL MINING IN THE AMAZON: AN APPROACH FROM BRAZIL AND ECUADOR

 <https://doi.org/10.56238/sevened2025.018-039>

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ABSTRACT

This study analyzes the dynamics of interagency cooperation in South America in the context of the fight against illegal mining in the Amazon region, with special emphasis on the cases of Brazil and Ecuador. It examines how the States of the Amazon basin articulate joint actions through inter-institutional cooperation and coordination agreements to mitigate the effects of this illicit activity on biodiversity and regional security. The research is structured in three axes: a theoretical-conceptual framework on interagency operations and the formulation of defense policies; an analysis of the sectors involved and the role of the Armed Forces in the Amazon; and a discussion of the results obtained along with possible solutions. Under a qualitative approach, supported by bibliographic review and documentary analysis, the work provides a comprehensive understanding of the mechanisms of regional governance in the face of a shared threat.

Keywords: Interagency operations. Illegal mining. Amazon. Regional cooperation. Biodiversity.

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1 INTRODUCTION

The Amazon is one of the most complex, vast and strategic ecosystems on the planet. Its importance transcends national borders due to its role in regulating the global climate, storing carbon and conserving biodiversity. This biome, which encompasses the territories of eight South American countries, is home to unparalleled cultural and biological diversity (ACTO, 2023).

Despite its ecological and geopolitical value, the Amazon region faces increasing pressures from illicit activities, among which illegal mining represents one of the most worrying threats. This practice causes massive deforestation, mercury pollution, and accelerated habitat loss, in addition to affecting the social fabric and increasing violence in local communities (UNEP, 2022).

Illegal mining has taken on a transnational dimension, operating through organized crime networks that take advantage of institutional weakness, scarce state presence, and porous borders. This reality has forced the States of the Amazon basin to seek joint responses through interstate and interagency cooperation mechanisms (MOREIRA, 2022).

In this context, interagency operations – joint actions between armed forces, civilian and environmental entities, and intelligence agencies – emerge as a key strategy. Its objective is to integrate state capacities for a more coordinated and effective response to environmental and security threats (ANSSELL; GASH, 2007).

This study focuses on the cases of Brazil and Ecuador, analyzing their regulatory, operational, and policy frameworks. Through the comparative review, it seeks to identify strengths, limitations, and opportunities for a more robust environmental governance in the Amazon.

The sustainable protection of the Amazon requires a vision articulated between security, environment and development. Therefore, strengthening interagency strategies is essential to face the challenges that threaten one of the most strategic and vulnerable territories on the planet.

2 JUSTIFICATION

Illegal mining represents a growing threat to biodiversity, social stability and the sovereignty of the States that make up the Amazon basin. Its transnational nature requires a coordinated and inter-agency response that goes beyond isolated approaches and strengthens regional governance. This study seeks to contribute to the understanding of the cooperative strategies adopted by Brazil and Ecuador, identifying good practices, challenges and opportunities for improvement in the joint management of environmental

safety. It also aims to contribute to the design of more effective and sustainable public policies, in a context where the protection of the Amazon is a global priority.

3 METHODOLOGY

This research adopts a qualitative approach, aimed at understanding the processes and dynamics of interagency cooperation in the fight against illegal mining in the Amazon. An exploratory and descriptive design is used, based on the study of comparative cases of Brazil and Ecuador. Information collection was carried out through two main techniques: bibliographic review and documentary analysis.

The literature review included academic sources, institutional reports, legal documents, and publications from multilateral organizations related to environmental security and regional cooperation. The documentary analysis focused on regulations, strategic plans, official communiqués and reports of inter-institutional operations carried out in areas of the Amazon affected by illegal mining. The information collected was organized and categorized thematically to facilitate the comparative analysis of the experiences of both countries.

4 GEOPOLITICAL AND ENVIRONMENTAL CONTEXT OF THE AMAZON IN SOUTH AMERICA

The region's strategic importance, mainly in the South American Amazon, with an area of more than seven million square kilometers, stands as the largest tropical forest on the planet. This region comprises territories of nine countries: Brazil, Peru, Colombia, Bolivia, Venezuela, Ecuador, Guyana, Suriname, and French Guiana (ACTO, 2021). Its vastness and diversity make it a key biome for climate balance, not only regional but also global.

In addition to being home to approximately 10% of the world's biodiversity, the Amazon has about 20% of the planet's surface freshwater. This data highlights its essential role in the hydrological cycle and the regulation of global temperatures (BEBBINGTON; BURY, 2013). For this reason, it is considered a strategic natural pillar that transcends national boundaries.

From a geopolitical perspective, the Amazon is not only a space for environmental conservation, but also a disputed territory. Its wealth in minerals, oil, timber, and genetic resources has aroused the interest of companies, governments, and illicit networks that seek to exploit it, often without considering its social and ecological impacts (SILVA; ALMEIDA, 2022).

This interest has generated both internal and external tensions. On the one hand, states try to assert their sovereignty and territorial control; on the other, non-state actors, including cross-border criminal groups, are emerging. This has led to the growing participation of the Armed Forces in environmental protection and public order control missions in remote areas (SILVA; ALMEIDA, 2022).

Consequently, the Amazon must be understood as a space where environmental, geopolitical and security dynamics converge. Its governance involves not only conserving biodiversity, but also ensuring state presence, regional cooperation, and respect for the rights of local communities.

5 MAIN ENVIRONMENTAL AND SOCIAL THREATS

Illegal mining is one of the most severe threats to the region. This practice causes profound environmental degradation, including deforestation, contamination of rivers with mercury and destruction of habitats. In turn, it favors the emergence of criminal economies that weaken the local social fabric (PARDO, 2020; RAMÍREZ, 2019).

This activity is carried out, in many cases, in territories that are difficult to access and with limited state presence. These conditions allow the expansion of criminal networks that link mining with drug trafficking, arms trafficking, and human trafficking, generating a spiral of violence in vulnerable areas (RAMÍREZ, 2019).

Deforestation, driven by extensive cattle ranching, large-scale agriculture, and infrastructure megaprojects, poses another critical threat. Between 2000 and 2020, the Amazon lost more than 30 million hectares of forest cover, significantly reducing its capacity to capture carbon and conserve biodiversity (ACTO, 2021).

In addition, this loss of forests is directly related to territorial conflicts. Indigenous communities, which have historically managed these territories sustainably, face constant threats such as forced displacement, violence, and criminalization of their leaders (BEBBINGTON; BURY, 2013; PARDO, 2020).

Institutional weakness and policy fragmentation between different levels of government exacerbate this situation. The lack of coordination between environmental, judicial and security agencies hinders the State's response to threats in the region. This highlights the need to strengthen multilevel and interagency governance.

In short, the challenges of the Amazon cannot be addressed in isolation. They require a comprehensive approach that combines conservation policies, security strategies, social inclusion and regional cooperation to ensure a sustainable future.

6 INTERAGENCY COLLABORATION AND ADVOCACY IN THE AMAZON

In recent years, there has been a notable increase in interagency relations. This phenomenon responds to the progressive increase in illicit activities, many of them linked to the illegal exploitation of non-renewable natural resources in the Amazon (MOREIRA, 2022). These actions, carried out by both individuals and criminal organizations, threaten environmental sustainability and the well-being of communities.

Groups associated with organized crime take advantage of institutional weakness in certain areas to impose their control, generating human rights violations, such as forced labor and the exploitation of vulnerable populations. This reality has prompted the creation of strategic alliances between state institutions and international actors to counter these threats (RODRÍGUEZ SÁNCHEZ, 2023).

Inter-institutional cooperation is presented as a key tool. According to Moreira (2022, p. 22), joint planning among the Armed Forces must be structured under common methodologies that integrate all agencies from the beginning of operations to their conclusion.

Ansell and Gash (2007) highlight the concept of collaborative governance, which promotes collective decision-making. This model contrasts with the hierarchical and legalistic approach of the Armed Forces, which is mainly oriented towards national defense. Collaborative governance favors a constant flow of information between the actors involved.

In this context, my research seeks to establish solid interagency links, relating security and defense with variables such as politics, environment, and national identity. The approach is based on a broad understanding of the problem of illegal mining, one of the main factors of environmental degradation in the Amazon region (ACTO, 2023).

The Amazon is made up of nine watersheds that cross eight South American countries: Brazil, Bolivia, Colombia, Ecuador, Peru, Venezuela, Guyana and Suriname, in addition to French Guiana. This geopolitical diversity motivated the creation of the Amazon Cooperation Treaty (1978) and the subsequent formation of the Amazon Cooperation Treaty Organization (ACTO, 2023).

Subsequently, in 2007, the Union of South American Nations (UNASUR) was established, with the aim of granting greater political representation to the Amazon region. These structures have partially contributed to regional articulation on strategic issues such as defense, sustainability, and environmental sovereignty.

The Amazon represents 8.45% of the South American territory, with 7.48 million km². It is considered the region with the greatest biodiversity on the planet, home to more than

1,300 species of vertebrates. In addition, its 6.9 million km² river basin plays an essential role in the continent's climate balance (ACTO, 2023).

This vast territory is home to more than forty million people. Many of them are organized in traditional socio-economic systems. The expansion of illegal mining is a critical threat, being one of the main drivers of deforestation in several countries (MOREIRA, 2022).

Faced with this situation, coordinated action by state and regional agencies is essential. It is necessary to establish sustainable policies and strengthen national and international cooperation agreements that allow effective intervention against illegal mining and other environmental crimes (ANSSELL; GASH, 2007).

Brazil has developed various military operations such as Yanomami I and II, and Pantanal I and II, aimed at protecting the Amazonian territory. These actions show the active role of the Armed Forces in the face of environmental and criminal threats (MOREIRA, 2022).

The participation of the Armed Forces in the management of challenges is not exclusive to Brazil. In Ecuador, its collaboration with State institutions is also evident, in roles such as environmental protection, humanitarian assistance, and citizen security (RODRÍGUEZ SÁNCHEZ, 2023).

However, in Ecuador it is still necessary to strengthen the links between the Armed Forces and state institutions. Although the legal framework allows for cooperation, in practice there is a logistical subordination that limits the potential for strategic collaboration (RODRÍGUEZ SÁNCHEZ, 2023).

It is essential to deepen the commitment of the Armed Forces to society, promoting effective synergies with civilian organizations. This will allow us to face current challenges in a coordinated manner, especially in vulnerable areas such as the Amazon.

In conclusion, interagency participation in the defense of the Amazon is crucial to guarantee the safety, sustainability, and well-being of communities. Only through joint work and strategic planning will it be possible to face today's threats and build a sustainable future.

7 REGULATORY AND INSTITUTIONAL FRAMEWORK OF BRAZIL AND ECUADOR

7.1 BRAZIL'S REGULATORY FRAMEWORK

Brazil, which owns approximately 60% of the Amazon's territory, is a key player in the management and conservation of this region. Its regulatory framework has evolved to face the multiple threats that affect the Amazon, highlighting the enactment of the Forest Code (Lei nº 12.651, 2012). This instrument establishes strict regulations on the use and conservation of the soil, imposing the obligation to maintain legal reserve areas on private

properties and permanent preservation zones, fundamental for the protection of ecosystems.

Despite the existence of a robust legal framework, the effective application of these rules faces serious difficulties. State oversight is insufficient due to the vast expanse of territory and the lack of adequate resources to monitor illegal activities. Clandestine mining, deforestation and wildlife trafficking continue to expand, sometimes with the complicity of local and transnational actors, which complicates environmental protection (SILVA; ALMEIDA, 2022).

In the international arena, Brazil has promoted and actively participated in regional mechanisms such as the Leticia Pact for the Amazon, signed in 2019. This pact is a key instrument for cooperation between Amazonian countries, focusing on the fight against illegal mining, deforestation and the effects of climate change, strengthening the collective commitment to the protection of the region (ACTO, 2021).

In addition, the Brazilian National Defense Policy, approved in 2012, highlights the Amazon as a strategic priority area for national security. This policy integrates military and civilian efforts, recognizing the need to protect natural resources in order to maintain territorial sovereignty. Consequently, the Brazilian Armed Forces play an active role in territorial control operations, combining defense work with environmental actions (SILVA; ALMEIDA, 2022).

Understanding the formulation of defense policy in Brazil requires considering the strategic objectives set for 2040. These guidelines are articulated within a comprehensive vision of national development, in which the Ministry of Defense, the Federal Police and various government agencies participate. Coordinated action between these institutions is key to preserving sovereignty and guaranteeing security in a strategic region such as the Amazon (LEONARD BELLO; QUINTANA GAZMURI, 2023).

The country's development requires strong governance, understood as the capacity of the State to set goals, formulate coherent policies, and monitor their compliance. In this sense, strategic planning instruments must be aligned with territorial, social and environmental needs, especially in sensitive areas such as the Amazon basin.

Decree No. 9.203/2017 defines public governance as a set of leadership, strategy, and control mechanisms to conduct effective public policies and provide services to society (BRASIL, 2017). This legal framework highlights the importance of results-oriented administration, which is essential in the management of national defense, particularly in the face of complex threats such as illegal mining and organized crime.

However, a frequent limitation in the implementation of defense policies lies in the lack of effective inter-institutional coordination. Despite regulatory efforts, challenges persist such as overlapping competencies, fragmentation in the execution of programs and poor interoperability between the different levels of the State. These factors weaken the ability to respond to emerging risks (TÓALA-BOZADA et al., 2022).

In this context, the integration of public and private actors around a coherent defence policy represents a strategic solution. This approach makes it possible to build intelligence systems that anticipate threats, prevent corruption, and strengthen democratic security. To this end, it is necessary to have clear institutional frameworks, sustained resources, and mechanisms for social control and transparency (DELGADO, 2024).

National defence cannot be approached in isolation. It is essential that security objectives be articulated with development, sustainability and social justice goals. This requires rethinking defense policy as a comprehensive public policy, involving multiple sectors and territories, with special attention to border, indigenous, and environmentally vulnerable regions (LEONARD BELLO; QUINTANA GAZMURI, 2023).

In short, it is proposed to strengthen cooperation between State institutions and social sectors for the execution of defense policies with a territorial and environmental vision. This approach will consolidate a robust political-institutional infrastructure, promote regional synergies, and ensure an effective defense of national interests and the Amazon biome.

7.2 REGULATORY FRAMEWORK OF ECUADOR

Although the extent of the Amazon in Ecuador is smaller compared to Brazil, the country plays an essential role in the conservation of the ecosystem due to its high biodiversity and the presence of multiple indigenous communities. The Ecuadorian Constitution of 2008 introduces an innovative approach by recognizing nature as a subject of rights, which implies a paradigmatic change in national environmental legislation (CONSTITUTION OF ECUADOR, 2008).

This constitutional framework is complemented by the Law on Territorial Planning, Land Use and Management (2016), which establishes clear restrictions on the expansion of extractive activities in the Amazon, such as mining and oil exploitation. The law seeks to protect areas of high environmental value and promote respect for the ancestral territories of indigenous communities (PARDO, 2020).

Ecuador has also developed public policies that integrate environmental conservation with sustainable development. The National Biodiversity Policy, for example, seeks to balance economic exploitation with the preservation of natural and cultural resources, promoting sustainable productive practices and the active participation of local populations (PARDO, 2020).

At the regional level, Ecuador has assumed an active commitment in multilateral forums such as ACTO and the Pact of Leticia, where it promotes cooperation to face common challenges such as illegal mining and deforestation. These spaces facilitate the exchange of information, the coordination of policies, and the development of joint projects to strengthen environmental governance (ACTO, 2021).

In order to properly direct the strategic guidelines for defense and security, it is essential that they be incorporated into national regulatory frameworks through presidential decrees. In Brazil, this function falls to the Civil House of the Presidency of the Republic, in charge of coordinating the acts of the Executive Branch, while in Ecuador, this function corresponds to the Council of Public and State Security (COSEPE), as an advisory body to the President in crisis situations (COSEPE, 2009).

COSEPE is responsible for providing recommendations on national security, defense, foreign policy, and domestic order, which allows the president to act with greater institutional support. This mechanism guarantees a comprehensive approach to security problems, especially in the face of unconventional threats such as cross-border environmental crimes, which require an articulated and multisectoral vision of the State.

In this sense, environmental crimes, such as illegal mining or species trafficking, are complex phenomena that simultaneously affect multiple countries in the Amazon region. These challenges must be addressed through coordinated public policies, both at the national and regional levels. The articulation of a common strategy can strengthen the defense of the territory, as long as collective interests are prioritized over isolated or particular approaches (Delgado, 2024).

Article 158 of the Constitution of Ecuador (CRE, 2018) establishes that the Armed Forces have as their fundamental mission the defense of sovereignty and territorial integrity. This constitutional mandate gives the armed forces a central role in the preservation of order and in the execution of actions aimed at development and national security. In this framework, their participation extends to the control of organized crime, the protection of borders and the safeguarding of the environment.

As part of this strategy, in 2018 former President Lenin Moreno enacted the National Defense Policy. This instrument recognizes the importance of integrating military capabilities

into the country's institutional system, promoting transparency, planning, and the commitment of the Armed Forces to the objectives of the State. The policy also highlights the role of defense in democratic consolidation and regional cooperation (Ecuador, 2018).

The articulation between public and private institutions, as Tóala-Bozada et al. (2022) point out, allows for the establishment of a more robust governance system, capable of generating strategic intelligence, preventing corruption, and planning more effective public policies. This integration is essential to address structural problems such as deforestation, illegal mining, and institutional weakening in peripheral areas.

In short, it can be pointed out that the consolidation of defence and security policies must contemplate a multisectoral and integrating dimension. Cooperation between government bodies such as State Institutions, respect for constitutional frameworks, and the strengthening of governance are pillars for an efficient response to the environmental and security threats facing the Amazon region.

Below, I will show a table taken from the database of constitutional texts and legislation of Atlas RESDAL (DONADIO and TIBILETT, 2014, p. 14 -22) involving the Armed Forces. AA in Public Security Activities (IADB, 2012)

Table 1. Legal Support and Non-War Activities in South America

Countr y	Missio n of the Armed Forces	State of Emerge ncy	Employment of the Armed Forces in Subsidiary Actions	Subsidiary Activities of the Armed Forces
Brazil	Constit ution Art. 145	Art. 84	Law on Standards for the organization, preparation and employment of the Armed Forces, Complementar y Law No. 97 - 10/06/1999./ Last reform: Complementar y Law No. 136 - 08/25/2010, Articles 15 and 16.	• Peace operations; • Cooperation with national development and participation of civil defense in institutional campaigns of public utility or social interest; • It is the responsibility of the FA to act, through preventive measures in border regions, at sea and in inland waters, regardless of their tendency, ownership or destination, against cross-border environmental crimes, to carry out, among others, the following actions: - I - patrol; - II - search for persons, land vehicles, vessels and aircraft;

				III - arrests in flagrante delicto.
Ecuador	Constitution Art. 158	Article 164	Law on Public Security and the State Article 163.- Complementarity of the Armed Forces and the National Police	• Security operations for critical facilities and resources; • Maritime security operations; • Operations to support crime control, against organized crime and • control of drug trafficking; • National Police Support Operations; • Arms control operations; • Population and resource control operations; • Support for other State entities; • Forest Control Support Operations; • Support operations and Risk Management;

Source: Taken from CRE (2008), Complementary Laws of Brazil.

In South America, the constitutional and legal frameworks of each country establish the conditions under which the Armed Forces (Armed Forces) can act beyond their traditional mission of defense. This subsidiary participation is generally activated in contexts of exception, emergency or serious alterations of the internal order. In such circumstances, their intervention in support of civil institutions is permitted, always under a normative mandate.

In seven countries in South America—Argentina, Bolivia, Brazil, Ecuador, Peru, Uruguay, and Venezuela—these subsidiary actions are authorized by specific regulatory bodies. In one of them, the basis of legitimacy is of a constitutional nature; in five, it is based on national laws, while one is governed by the internal regulations of the Ministry of Defense (ECLAC, 2021).

These legal provisions not only delimit the powers of the Armed Forces, but also establish control and supervision mechanisms, seeking to avoid abuses or deviations from their main role. The expansion of its functions is usually justified by the weakness of certain civil institutions in peripheral territories, as is the case in large areas of the Amazon.

Subsidiary actions are carried out in various areas, always in coordination with civil entities. Among the most frequent are risk management in the face of natural or man-made disasters, peace operations under the framework of the UN, and community action in areas such as health, food, education, recreation and construction.

Border surveillance is also one of the priority areas, aimed at combating drug trafficking, organized crime, smuggling, arms trafficking, and other transnational threats. In the environmental sphere, operations aimed at confronting illegal mining and forestry

crimes, activities that rapidly degrade the Amazon region, stand out (BEBBINGTON; BURY, 2013).

These interventions require a clear articulation between state actors and, in many cases, with international organizations. Such coordination is essential to guarantee the legality, proportionality of the use of force and respect for human rights.

The graph below presents a comparative view of how mining—legal and illegal—has penetrated the Amazonian territories of the Amazon Cooperation Treaty Organization (ACTO) member countries. This analysis allows us to observe the different degrees of affectation and the institutional response deployed.

Figure 1. Activities carried out in the Amazon Basin developed in the South American Region.



Source: MONGABAY, 2023, The map shows the areas where mining has been installed in the Amazon.

According to a report by Mongabay (2023), as of August of that year, 58 points of mining activity were identified in the Amazon basin, distributed between river and forest areas. Of these, 49 sites correspond to irregular or illegal operations, while only nine comply with current environmental regulations.

The legal activities observed implement adequate protocols for waste management, apply controls on polluting emissions and have mitigation procedures in case of environmental impact. These conditions are critical to reducing pollution of aquatic and terrestrial ecosystems in the Amazon region.

In contrast, illegal operations not only violate national and international law, but also contribute significantly to environmental degradation and the deterioration of public health in local and indigenous communities. This situation highlights the need to strengthen oversight and inter-institutional cooperation among the States of the Amazon basin.

8 INTER-INSTITUTIONAL COOPERATION AND CHALLENGES

In both countries, progress has been made in the creation of inter-institutional cooperation mechanisms that integrate civilian and military agencies and non-governmental

organizations. This articulation seeks to respond more effectively to the complexity of the threats facing the Amazon, especially those linked to organized crime and the illegal exploitation of resources.

However, challenges remain. The limited state presence in remote areas, insufficient technical and financial resources, and the influence of illegal actors make it difficult to fully implement environmental policies. Weak governance and lack of coordination between levels of government and sectors increase the region's vulnerability to illicit activities (RAMÍREZ, 2019).

In this context, regional agreements, such as the Leticia Pact, are essential to promote integrated environmental governance. These platforms facilitate cross-border cooperation, information exchange, and the execution of joint operations, contributing to strengthening sovereignty and sustainability in the Amazon (BEBBINGTON; BURY, 2013).

Interagency collaboration between environmental agencies, security forces and local communities is presented as a key strategy to improve the effectiveness of actions against illegal mining and other environmental crimes. In the future, it is essential to consolidate this cooperation, improve training and provide adequate resources to the actors involved to ensure sustainable results.

Something very important that has not been mentioned so far, are the interagency theories that Brazil uses which I will highlight and how they act, so that National Security and Inter-agency operations act in a coordinated way, but how coordinated is their performance? It is a question in which we are going to understand.

On the one hand, in Brazil, inter-agency action is articulated by a political objective, according to Law No. 964 of May 2, 1984, "organized by the presidency of the republic", altered by MP 2049-21 of July 28, 2000, where they impose that joint action with the Armed Forces in the preservation of the fight against cross-border and/or environmental crimes, in civil defense and in the development of the national", since the action with the Armed Forces. AA and the Federal Police in the actions they take to prevent access to the territory of materials from illicit activities, drug trafficking, or arms smuggling, which are framed in the transparency that can be a strategic mechanism of communication between institutions and society; and also a tool for better monitoring of public policies on defense and institutional action.

Considering the above, the Brazilian State, in order to protect against threats that impact internally against national targets, used a large number of operations known as Inter-agencies, in which this model is in the glossary of the Armed Forces and is defined as:

[...] interaction of the Armed Forces with other agencies in order to reconcile interests and coordinate efforts to achieve convergent objectives and/or purposes that serve a common good, avoiding duplication of actions, dispersion of resources and divergence of solutions with efficiency, effectiveness, and lower costs. The same as OPERATIONS IN AN INTERAGENCY ENVIRONMENT (MD, 2015, P.196).

In the same way, in other publications of the Ministry of Defense of Brazil, which examines the execution of these operations, in which it clarifies that:

Interagency operations have characteristics such as: (i) relevance of the public opinion factor; (ii) existence of a designated military command without there being an assumption of operational control over the agencies participating in the operation, but rather the coordination of tasks, in order to enable a better performance of the military and civilian resources used [...] (vi) the possibility of the use of the Armed Forces in conjunction with government bodies at the federal, state, and municipal levels; (vii) the need to train military personnel to act in agency operations; (viii) complexity of actions, which require the military to know the concepts, characteristics, and missions of interagency institutions and to know how to conduct civil affairs activities, so that they act in an integrated and synchronized manner as a single mission objective (MD, 2017, PG. 16-20).

It is clear that the Brazilian State must consider these points very clearly and transparently for the area of defense and national security, having an armed forces as protagonists, referring to the fact that these are just some of the tools that the State has to solve internal problems, also considering that each of these governmental or state organizations are subordinate to each ministry, as well as the cabinet of institutional security, defense, justice, environmental economics, among others.

Finally, Brazil has a variety of strategic programs that consolidate its inter-institutional approach to defense and security. These include the Integrated Border Protection Program, the National Border and Currency Security Program, as well as Operations Ágata and Verde Brasil. These initiatives reflect a complex institutional framework, supported by coordinated actions between various state agencies and the Armed Forces, with a view to confronting local, national, and even transnational threats.

These interagency operations are representative of the cooperation model adopted by the Brazilian State. Indeed, its design contemplates a high degree of institutional transparency, which is not only a fundamental democratic principle, but also a tool to optimize the response to emergency situations (Ministério da Defesa, 2017). This approach is pertinent to the growing demand for territorial control and environmental protection, especially in highly vulnerable areas such as the Amazon.

In the regional context, the Amazon Cooperation Treaty Organization (ACTO) has positioned itself as a key space for interstate articulation. Brazil, by leading several of these efforts, promotes joint actions with other member countries and with the support of

international actors such as the United States. These collaborations seek to address complex challenges linked to organized crime, illegal mining, and other illicit activities that structurally affect the Amazon basin (ACTO, 2022).

With the beginning of the 21st century, humanity has witnessed significant advances in technology, communication, and reduction of extreme poverty. However, this era has also brought with it new challenges, with the environmental crisis being one of the most urgent. The degradation of the natural environment not only threatens biodiversity, but also directly compromises human security and the stability of ecosystems (Leff, 2014).

After the dissolution of the communist bloc in the 1990s, the international system entered a phase of reconfiguration. New theories about security and cooperation emerged in response to a more interdependent global reality. In this context, in 2005 the Organization of American States (OAS) proposed a renewed vision of hemispheric security, which gave rise to a debate on the role of the Armed Forces in times of peace (Frasson-Quenoz, 2015).

This transformation is also reflected in the Ecuadorian case. The creation of the Ministry of Defense in 1935 responded to the need to institutionalize the state response to interstate conflicts, particularly with Peru. However, for decades, the lack of clear policies and adequate budgets made it difficult to consolidate a robust defense structure (Ministry of Defense of Ecuador, 2019).

In this line, it is argued that territorial delimitation has been a key factor in the construction of political and social cohesion in Ecuador. This is manifested in its institutional history, marked by conflicts such as the Cenepa War in 1995, which evidenced the limitations and strengths of the military apparatus in the context of a national crisis.

From this framework, fundamental questions arise: what have been the main threats, real or perceived, in Ecuadorian history? Who has defined these threats and with what criteria? What has been the role of the Armed Forces in the construction of democratic institutions? These questions allow us to reconstruct the role of the military at different stages of the country's political development.

At the same time, in South America, the use of the Armed Forces in subsidiary missions has intensified. These tasks include public health assistance, environmental protection, border control, and logistical support in natural disasters. This functional expansion responds to both new threats and social demands that exceed the operational capacity of other state agencies (Cepik & Antunes, 2021).

In this sense, the governments of the region have incorporated these new functions into their public policy and defense documents. From constitutional reforms to defence white

papers, there is a general trend to redefine the limits of action of the Armed Forces, seeking to reconcile operational efficiency with civilian control and respect for human rights.

These legal and doctrinal modifications constitute a response to the current geopolitical environment, characterized by the multidimensionality of threats. Transnational crime, drug trafficking, illegal mining, climate change, and environmental vulnerability require a continuous review of military functions, as well as the governance model in security and defense.

9 RESULTS

In the area of illegal mining in the Amazon, the FAB participates together with other forces in inter-agency efforts and non-governmental organizations in the area called "Triple Frontier", Three Borders or Iñapari Triangle, made up of the territory of the Brazilian municipalities of Tabatinga and Benjamin Constant, in the state of Amazonas, the territories of the Peruvian towns of Iñapari and Tacna; and Colombians from Leticia and Puerto Nariño, in the department of Amazonas. Joint Operation: On May 22, 2019, Peruvian Army, Army Aviation, and Marine Corps Ground Forces launched the operation to disrupt illegal gold mining in the Madre de Dios region, considered an illegal mining area in the Amazon, whose criminal acts would involve narco-terrorist groups.

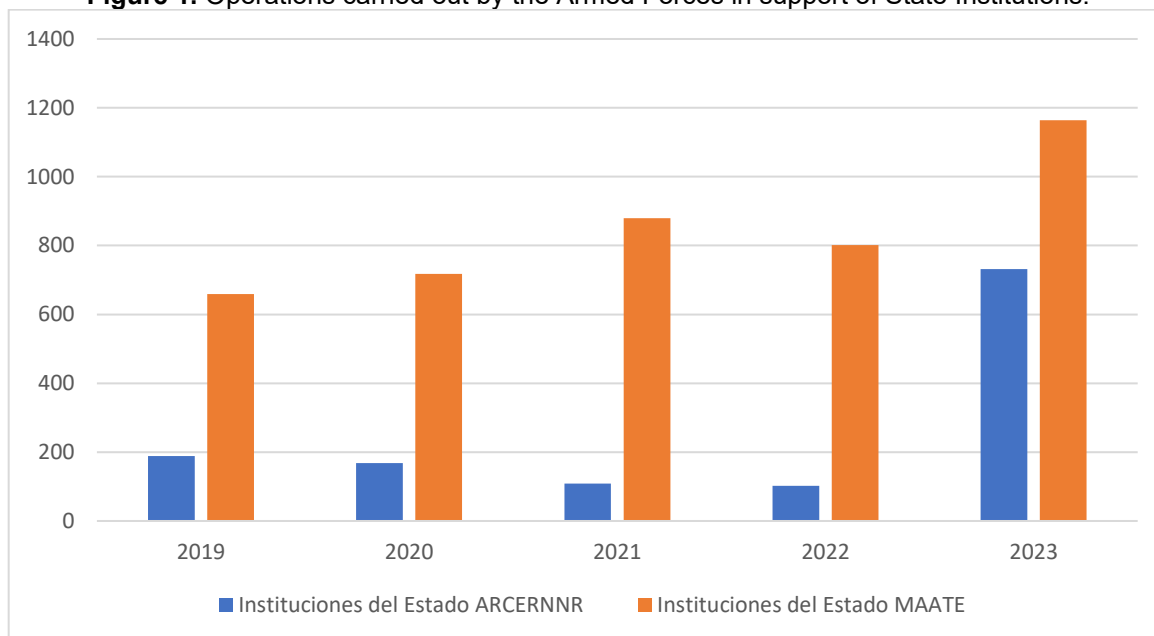
During the development of the operation, in the Malinowski River basin, the town of Leeroy and Puerto Orgaz, multiple illegal mining camps were identified, destroying machinery and enemy camps. In turn, personnel from the Air Interdiction Security Force and Rada intercepted unauthorized air routes in the cities of Cristalita and Santa Rosa, respectively, in which they detected the approximate volume of cargo of 100 and 150 tons of chemical inputs (Eduardo Villagra, 2021)(Delgado Castro) (from USAID, 2021) for the production of cocaine paste and diverted trafficking to authorized airfields. These airfields were controlled by the country's aerospace and aerospace defense forces.

In Ecuador, in the Province of Napo and Morona Santiago, CAMEX operations of legal competence are carried out, intervening in the Napo River, with the Manatí 1 operation, between 2022 and 2024 it went from 1,118 to 2,024 hectares in the cantons Carlos Julio Arosemena Tola and Tena, according to data from Map Biomas Amazonia, which were contrasted with geographical analyses of the Napo Ama la Vida Social Movement. 96% of Napo's mining is concentrated in these two cantons.²

² Connectas.org and Yesenia Palacio, "Napo, where legal and illegal mining merge like gold," *CONNECT* (blog), November 22, 2024, <https://www.connectas.org/napo-donde-la-mineria-legal-y-la-ilegal-se-funden-como-el-oro/>.

In this sense, an illustrative graphic is presented below on the intervention of the Armed Forces of Ecuador in support of State Institutions (EI), as part of an inter-institutional coordination that makes their deployment in different areas of the national territory viable.

Figure 1. Operations carried out by the Armed Forces in support of State Institutions.



Source: (SANTILLAN R.M.B, 2024),

When analyzing Figure 2, the intervention of the Armed Forces of Ecuador in support of different State Institutions (EI) is evidenced, with emphasis on the Ministry of the Environment, Water and Ecological Transition (MAATE) and the Agency for the Regulation and Control of Energy and Non-Renewable Natural Resources (ARCERNNR). The data reflect a significant increase in control actions aimed at illegal mining, highlighting an increase of 75% in 2023, with a total of 721 joint operations executed by these institutions.

In particular, MAATE's participation reached 89% in these interventions during the same period, which shows a substantial intensification of actions in defense of the environment. This inter-institutional cooperation has helped to strengthen the State's presence in strategic territories and to consolidate operational capacities against illicit activities.

The results presented allow us to infer that the use of the Armed Forces, within the framework of national security agendas, favors greater institutional effectiveness. In addition, it promotes the optimization of logistical resources and the reduction of the impacts derived from environmental crimes. It is reasonable to assume that, in the absence of military

support, levels of environmental crime, as well as ecological damage, would be significantly higher than those reflected in current data.

The aforementioned figure clearly shows the positive impact of inter-institutional operations in the containment of illegal mining, as well as the strategic role played by the Armed Forces in the framework of a public policy of environmental protection and territorial sustainability.

10 FINAL CONSIDERATIONS

Interagency operations in the Amazon region of Brazil and Ecuador have made significant progress in identifying pockets of illegal mining, indiscriminate logging, and irregular occupations, as well as improving state presence in historically marginalized territories. However, the results show that these efforts are not yet sustainable or sufficient to eradicate the structural threats that affect the Amazon. The lack of continuity in public policies, the scarcity of logistical and human resources, and institutional fragmentation hinder the long-term effectiveness of interventions (SILVA; ALMEIDA, 2022).

In addition, local communities and indigenous peoples are often not included in the planning and execution of these operations, which limits their impact and, in some cases, generates social tensions (PARDO, 2020). At the regional level, although instruments such as the Leticia Pact have made it possible to establish channels of dialogue among Amazonian countries, their effective implementation remains limited by the absence of a robust regional environmental governance system with oversight capacity (ACTO, 2021).

Faced with this scenario, it is proposed to strengthen regional cooperation mechanisms through the creation of an Amazonian multinational force dedicated to combating environmental crimes, the increase of national budgets for environmental protection, and the active integration of indigenous communities as key actors in territorial surveillance (RAMÍREZ, 2019).

It is also suggested to promote the use of real-time satellite monitoring technologies, facilitate the exchange of information between security and environmental agencies, and generate economic incentives for sustainable development practices. The approach must be holistic, considering not only security and defense, but also environmental justice, human development, and the protection of collective rights (BEBBINGTON; BURY, 2013).

In summary, although interagency operations have set an important precedent in the management of environmental security in the Amazon, it is essential to move towards more comprehensive, sustainable and participatory models that allow us to effectively address the ecological, social and geopolitical challenges of the region

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