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Criminal organizations and the use of drones with explosives: transforming patterns of violence and impact on public safety.

Criminal organizations and the use of explosive-laden drones: transformation of violence patterns and impact on public security

Agley Pereira Cavalcante - Cadet of the Military Police of Amazonas. Specialist in Public Security Policy and Management from Faculdade Única (2023). Bachelor's degree in Pharmacy from Universidade Nilton Lins - UNL (2017). Currently pursuing a Bachelor's degree in Public and Citizen Security from Universidade do Estado do Amazonas - UEA.

Contact: agleyperreira@gmail.com Lattes: <http://lattes.cnpq.br/8371640011676958>

Hélio dos Santos Júnior - Cadet of the Military Police of Amazonas. Specialist in Criminal Law and Criminal Procedure from Faculdade Venda Nova do Imigrante – FAVENI - (2021). Bachelor of Laws from Faculdade Brasileira de Vitória – MULTIVIX - (2020). Currently pursuing a Bachelor's degree in Public and Citizen Security from Universidade do Estado do Amazonas – UEA – (2025). Contact: heliiosantosjr@gmail.com Lattes: <http://lattes.cnpq.br/6136700105035087>.

Linton Sá Botelho - Cadet of the Military Police of Amazonas. Specialist in Public Security from Faculdade Focus (2024). Bachelor's degree in Civil Engineering from the State University of Amazonas - UEA (2018). Currently pursuing a Bachelor's degree in Public and Citizen Security at the State University of Amazonas - UEA.

Contact: linton.sa09@gmail.com Lattes: <http://lattes.cnpq.br/2593891912429398>.

José Rodrigo Barbosa das Neves - Cadet of the Military Police of Amazonas. Specialist in Public Security and Police Activity from the Padre Arnaldo Janssen Law School (2018). Bachelor of Laws from the Centro Universitário de Ensino Superior do Amazonas - CIESA (2014). Currently pursuing a Bachelor's degree in Public and Citizen Security at the Universidade do Estado do Amazonas – UEA. Contact: rodrigunderline@gmail.com Lattes: <http://lattes.cnpq.br/4720184278868069>

Paulo Victor Andrade Sales - Major in the Military Police of Amazonas. Master's student in Public Security (UEA). Bachelor of Laws from Cruzeiro do Sul University (2018) and Bachelor of Public and Citizen Security from the State University of Amazonas – UEA (2014). Email: aspirapvictor@gmail.com.
Lattes: <http://lattes.cnpq.br/4040168512393976>.

Summary

The incorporation of emerging technologies by organized crime has expanded its offensive capacity and impacted public safety. In this scenario, the use of drones associated with explosive devices represents a significant threat, with the potential to alter traditional patterns of violence. This article analyzes the implications of the use of drones with explosives by criminal organizations for the planning and actions of public security forces, especially the Military Police. This is a qualitative and exploratory research, based on bibliographic review and documentary analysis of national and international sources. The results indicate that this practice enables remote attacks, reduces the direct risk to aggressors, and hinders the state response. It is concluded that the phenomenon poses strategic challenges to public safety, requiring doctrinal updating and strengthening of police intelligence.

Keywords: Criminal organization; Drones; Explosives; Public security; Armed violence.

Abstract

The incorporation of emerging technologies by organized crime has expanded its offensive capacity and impacted public security. In this context, the use of drones combined with explosive devices represents a significant threat, with the potential to alter traditional patterns of violence. This article analyzes the implications of the use of explosive-laden drones by criminal organizations for the planning and performance of public security forces, especially Military Police institutions. This study adopts a qualitative and exploratory approach, based on a bibliographic review and documentary analysis of national and international sources. The results indicate that this practice



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enables remote attacks, reduces direct risk to offenders, and hinders state response. It is concluded that this phenomenon poses strategic challenges to public security, requiring doctrinal updates and strengthened police intelligence.

Keywords: *Organized crime; Drones; Explosives; Public security; Armed violence.*

1. Introduction

Contemporary organized crime in Brazil is characterized by high adaptive capacity and the use of increasingly sophisticated means of violence, highlighting- if the systematic use of explosives in attacks on bank branches, police units and state infrastructures. This phenomenon, widely associated with the so-called "New Cangaço," It goes beyond a purely patrimonial purpose, taking on symbolic and performative dimensions. aimed at intimidating the State and deliberately producing collective fear in local populations. (Aquino, 2020).

In parallel, the spread of unmanned aerial vehicles (UAVs), popularly known as Known as drones, they have introduced a new technological vector into the landscape of organized violence. International studies show that violent non-state groups have begun to incorporate drones. as instruments of surveillance, transportation, and remote attack, taking advantage of their accessibility, low cost and relative ease of operation, which significantly expands the reach and lethality of their actions (Veilleux-Lepage; Archambault, 2022).

Internationally, there is consistent evidence of the use of drones equipped with explosives used by criminal cartels and armed groups in different conflict contexts. highlighting a qualitative shift in patterns of violence. Analytical reports indicate that Recent experience with contemporary wars, such as the conflict in Ukraine, has contributed to the The spread of tactics that combine remote attack, precision, and low risk to the attacker, expanding the asymmetry between state forces and non-state actors (CTC WESTPOINT, 2025).

In the Brazilian context, empirical records widely disseminated by media outlets. News reports from national circulation indicate the emergence of recent episodes involving the use of unmanned aerial vehicles associated with explosive devices, signaling a possible Technological adaptation of criminal factions to new scenarios of confrontation with the State. (CNN Brazil, 2025).

Given this, how can criminal organizations use drones carrying explosive devices? It transforms patterns of violence and what implications this has for planning and action. public safety?

The overall objective of this research is to analyze how the potential use of drones with Explosive devices used by criminal organizations could transform patterns of violence in Brazil. And what are the main implications of this threat for security planning and action?



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public, especially for the Military Police.

Specifically, the aim is to understand the legal concept of organization.
criminal, examine the use of drones with explosives by criminal organizations and assess the
State response and actions of security forces in the face of this challenge.

It is hypothesized that the integration of drones into the explosive arsenal of the factions...
criminal activity represents an evolutionary leap in the patterns of violence in Brazil, ceasing to be a
A threat that is purely terrestrial is becoming three-dimensional. This phenomenon increases vulnerability.
of critical infrastructure and police units, generating a disproportionate impact on perception
of social risk and demanding that the strategic planning of the Military Police prioritize the
Air intelligence and preventive monitoring.

2. Methodology

Methodologically, this study is characterized as a research approach.
qualitative and exploratory in nature, based on the assumptions of Demo (2011), which
understands research as a scientific and educational principle indispensable to critical dialogue with
social reality. The choice of a qualitative approach is justified by the complexity of
The phenomenon analyzed is the use of UAVs (Unmanned Aerial Vehicles) associated with explosive devices by organizations.
criminal activities, which involve legal, strategic, technological, and symbolic dimensions, which do not
They can be adequately apprehended by exclusively quantitative methods.

The research is bibliographic and documentary in nature and is not restricted to a physical space.
specific to empirical data collection, since it is based on the analysis of secondary sources. The selection
The analytical study focuses on the Brazilian context of public security, with special attention to...
implications of the phenomenon for the actions of the Military Police, considering territorial realities.
complex. The object of study consists of the analysis of the use of drones associated with explosive devices.
by criminal organizations and the impacts of this practice on strategic planning, the
Operational doctrine and the State's response capacity.

The study's time frame encompasses the period between 2015 and 2025, a defined interval.
due to the increased use of drones in international armed conflicts, and the expansion of
access to these technologies in the civilian market and the emergence of documented records of their
employment by criminal organizations. This timeframe allows us to observe recent developments.
of the phenomenon and its contemporary repercussions on patterns of violence and challenges
Taxes levied on public safety.

The bibliographic research was carried out through the collection, selection, and critical reading of
books, scientific articles and specialized periodicals in the areas of criminology and public safety
and criminal law. In this context, the main theoretical references used were: the study of



Aquino (2020), who analyzes performative violence and the phenomenon of the “New Cangaço”; the work by Feitoza and Alves Junior (2020), which empirically examines the criminal use of explosives in Brazil, with emphasis on territorial and operational impacts; the research by Veilleux-Lepage and Archambault (2022), who investigates the use of drones by violent non-state actors in different regions of the world; and analytical reports from CTC Westpoint (2025), which discuss the spread of drone tactics in contemporary conflicts and their adaptation by non-organizations. The spread of drone tactics in contemporary conflicts and their adaptation by non-organizations. state-owned enterprises. These studies provided the theoretical support for understanding rationality. organizational, professionalization of violence, and incorporation of emerging technologies by organized crime.

Documentary research complemented the theoretical foundation through the analysis of normative and institutional documents and specific public records. In legal terms, it was The analysis examined Law No. 12.850/2013, which defines the concept of a criminal organization in the legal system. Brazilian law and forms the basis for the legal approach adopted in the study. In the field of public security and Regarding explosives control, the Military Police's Standard Operating Procedure was examined. from Amazonas (POP PMAM – First Intervention in Incidents with Explosives, version (revised in 2022) and Brazilian Army Ordinance No. 147-COLOG/2019, which provides for the Control and inspection of explosives and controlled products. Reports were also analyzed. and public records released by security agencies and research institutions that describe incidents involving the use of drones and explosive devices, as well as technical documents. international reports, such as those from the International Centre for Counter-Terrorism (ICCT), address The illicit use of drones by non-state actors.

In addition, news articles from various media outlets were used. communication of recognized credibility, specifically reports from CNN Brazil, El País and Gazeta do Povo, which documents recent episodes of the use of drones with explosives by Criminal factions in Brazil. These sources were used exclusively for contextualization. empirical evidence of widely publicized events, without central evidentiary value, serving only to to illustrate the practical manifestation of the phenomenon analyzed.

The treatment and analysis of the data followed the thematic qualitative analysis method, with Identification of analytical categories related to the technological adaptation of organizations. criminal activities, the tactical advantages of using drones with explosives, and the institutional impacts regarding public safety. The analysis sought to articulate the legal framework and the theoretical references. and the documented empirical evidence, focusing on the challenges posed to planning. strategic and operational doctrines of the Military Police.

With regard to ethical aspects, the research fully observed the principles. applicable to research in the Humanities and Social Sciences, according to Resolution No. 510/2016 of



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National Health Council. Because this is a purely bibliographic and documentary study,

Based on official documents, scientific literature, and open-access public sources, there was no...

The project did not involve the collection of primary data involving human subjects, nor the use of personal or sensitive information. Therefore, submission to the Ethics Committee was not required.

Research, since the study falls within the hypotheses foreseen in article 1, sole paragraph,

item V, of Resolution No. 510/2016 of the National Health Council, for using exclusively

Public sources and open access data, in accordance with the guidelines of the CEP/CONEP system and directives. operational aspects of the Brazil Platform.

3. Discussion of the results

3.1 Legal concept of a criminal organization

The legal concept of a criminal organization in the Brazilian legal system is found... enshrined in Law No. 12,850, of August 2, 2013, which provides for criminal investigation, the means of obtaining evidence and suppressing criminal offenses committed by organizations. criminal. According to article 1, §1, a criminal organization is considered to be an association of four or more people, structurally ordered and characterized by the division of tasks, even though informally, with the aim of obtaining, directly or indirectly, an advantage of any kind, through the commission of criminal offenses whose maximum penalties exceed four years or that be of a transnational nature (BRAZIL, 2023).

This concept represents an advancement compared to traditional pageant figures. people or gangs when highlighting elements such as stability, organizational structure, and division. Functional tasks, aspects that manifest themselves concretely in the actions of the factions. Contemporary criminals. An empirical analysis of the Amazon Revolutionaries faction. (RDA) shows that such organizations operate in a rational and strategically oriented manner, with the capacity for planning, territorial control and logistical coordination, characteristics that... They differentiate themselves from common crime and bring them closer to the legal model of a criminal organization. as provided for in Brazilian legislation (Sales et al., 2025).

From a legal and criminological perspective, the division of tasks is a central element for to understand the sophistication of these organizations. As observed in investigations on the In operations involving "Novo Cangaço" and international groups, there are specific functions related to intelligence. Logistics, arms acquisition, explosives manufacturing, target monitoring, and execution. of violent actions (Lemos, 2017). The introduction of drones in this context further reinforces this. functional specialization, requiring operators with technical knowledge, responsible for piloting, payload adaptation and attack synchronization.

Furthermore, the use of emerging technologies, such as armed UAVs, highlights the



the ability of criminal organizations to absorb innovations originally restricted to states or Military forces. International studies indicate that violent non-state groups use drones not only as tactical instruments, but as power multipliers, capable of compensating numerical or territorial inferiorities in relation to state forces (Veilleux-Lepage; Archambault, 2022). This logic is fully compatible with the legal concept of a criminal organization, a because it demonstrates strategic planning, instrumental rationality, and a pursuit of advantage. illegal through the use of sophisticated means.

In the Brazilian context, factions such as Comando Vermelho and other organizations regional areas perfectly meet the legal requirements of Law No. 12.850/2013, especially when observing the coordinated use of explosives, restricted weapons and, more recently, Drones adapted for attack and surveillance (CNN Brazil, 2025). Such practices reinforce the the need to interpret the legal concept of criminal organization in a dynamic way, keeping pace with the technological evolution of the methods employed.

Thus, the legal concept of a criminal organization does not only have a function. It is both classificatory and operational, as it underpins the legitimacy of state action, the use of... special investigation techniques and the formulation of public policies aimed at addressing of complex and technologically sophisticated threats, such as the use of drones associated with practices violent.

4.2 Use of drones with explosives by criminal organizations

4.2.1 Types of Drones and Capabilities (Payload, Range, Accuracy)

Drones can be classified in various ways based on their characteristics. Technical aspects, such as configuration type, payload capacity, range, and flight autonomy. Next, The main types of drones found on the market are detailed, some of which are widely used. used by criminal organizations to transport or launch explosives (MSS Defence, 2022).

There are multi-rotor drones (quadcopters, hexacopters, octocopters). These drones are Widely used due to their high maneuverability and ease of operation. Models such as The DJI Phantom and Mavic Pro are capable of carrying lightweight explosives (up to 2-3 kg), with a range... up to 7 km range and a flight time of 20 to 30 minutes. Its ability to hover over specific targets and Operating in urban environments makes them ideal for stealth attacks and surveillance, which facilitates their use. use by criminal organizations in dense urban areas (AUAV, 2021).

Other relevant categories include fixed-wing drones and kamikaze models. Fixed-wing aircraft, exemplified by the RQ-4 Global Hawk, are designed for long range (greater than 50 km) and loads of up to 10 kg, being strategic vectors against critical infrastructure due to their

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Energy efficiency is also a factor. Kamikaze drones, such as the Switchblade 300 and the... also stand out. Shahed-136, designed for high-precision suicide attacks. With a flight time of up to 2 hours, these

These devices are effective in destroying armored vehicles and military installations, offering a favorable cost-benefit ratio in real combat scenarios (MSS Defence, 2022).

Nano/Micro-drones are very small drones, weighing less than 0.25 kg and with a range of... Reduced, they are especially difficult to detect and intercept. Their ability to carry Small explosives or detonation devices make these drones useful for operations. clandestine operations and stealth attacks in densely guarded urban areas. With limited autonomy. Despite their small size, these drones can be used for espionage or to deliver devices. Light explosives are used precisely. (MSS Defence, 2022)

Within the spectrum of advanced technologies, hybrid VTOL (*Vertical Take-Off*) drones stand out. (*Off and Landing*) and swarm drone operation . Hybrid models combine the The vertical takeoff maneuverability of multirotors, combined with the autonomy and range of fixed-wing aircraft, allowing for the transport of larger loads in complex missions, which expands its usefulness in Coordinated attacks by criminal organizations. In parallel, the swarm trend involves... Multiple vectors operating in a coordinated manner to carry out simultaneous and massive attacks. Saturating the defenses and making interception difficult. Both technologies, although in different ways. The stages of appropriation by terrorist groups represent a significant evolution in offensive capability and the complexity of aerial threats (AUAV, 2021).

TYPE OF DRONE	PAYLOAD	REACH MAXIMUM	MAIN AUTONOMY	TACTICAL APPLICATION
Multi-rotor	Light (2 to 3 kg)	Short Up to 7 km	20 to 30 min	High maneuverability. Ideal for urban surveillance, hovering, and stealth attacks in dense areas.
Fixed wing	Heavy (Up to 10 kg)	Far away Greater than 50 km	Several hours (5 to 24 hours depending on the model)	Energy efficiency. Long-range attacks against critical infrastructure and command centers.
Kamikaze	Integrated (Explosive warhead)	Average Estimated: 10 to 40 km	Up to 2 hours	High-precision (surgical) suicide attacks against armored vehicles and specific targets.
Nano / micro	Minimum (< 0.25 kg)	Reduced Estimated: ~2 km	~25 min	Internal espionage and delivery of detonators. Extremely difficult to detect visually or by radar.
VTOL hybrids	Moderate (Superior multi-rotor)	Extended Estimated: 60 to 100 km	2 to 8 hours	Total flexibility. Takes off vertically (without a runway) and travels as far as an airplane.
Swarm	Distributed attacks simultaneously	Variable (Depends on the base drone)	Variable (Depends on the base drone)	Saturation of defenses. Multiple drones (Payload interception).

Source: Comparative table prepared by the authors (2026), based on MSS Defence (2022) and AUAV (2021).

4.2.2 Modes of Use of Drones with Explosives in the International Scenario

In the international context, the use of drones armed with explosives by organizations

Criminal and terrorist groups have intensified their activity, adopting different operational methods. which reflect the adaptation of these technologies to environments of conflict and organized crime. (Nagel, 2025). The main observed employment methods are presented below, with cases Real, documented facts.

One of the most obvious ways these devices are used is in targeted attacks on security forces or state infrastructure. In Mexico, for example, drug cartels started Adapting drones for the transport of weapons and explosives. According to a report in the Jornal de News reports indicate that the Mexican Defense Minister stated that "certain cartels are using drones carrying weapons." with explosives" in at least three states: Jalisco, Guanajuato, and Michoacán. This type of action This represents a shift in confrontation tactics, from human ambush to air strike. remote, posing a greater risk to the target and less to the aggressor (Jornal de Notícias, 2025).

In 2025, a Fox News report mentioned that leaders of Mexican cartels They authorized the use of kamikaze drones and other explosives against Border Patrol agents. from the US (Fox News, 2025). These cases illustrate that the use of drones with explosives has ceased to be... to be an eventual diversion to become part of a direct attack strategy, with remote reach. and less risk for the aggressor.

A recent logistical development is the structuring of dedicated 'pump workshops'. to arm drones. A notable example occurred in October 2023 in Jalisco, Mexico, where Authorities seized approximately 40 cylindrical bombs fitted with fins, and 20 kg of shrapnel. and 7 kg of gunpowder. This infrastructure demonstrates both the technological adaptation for illicit purposes Regarding the advance production of aerial vectors, this indicates a high degree of planning and Operational sophistication of criminal organizations (Associated Press, 2023).

Although still rare in the criminal sphere, the swarm tactic *evolves* from contexts military attacks on non-state actors, as the *On the Horizon* study points out . Unlike attacks In unitary approaches, this modality coordinates multiple vectors for simultaneous suppression or Bombardment, aimed at saturating defenses and diverting attention to make interception more difficult. Additionally, in external conflicts, the use of fixed-wing or hybrid drones is observed. for deep penetration into enemy territory. Such vectors allow the transport of lethal payloads. (explosives or ammunition) to isolated locations, bypassing land blockades and surveillance. conventional methods involve moving material directly from the point of production to the target (CTC Westpoint, 2025).

Drones carrying explosives are also used to attack symbolic or high-profile targets. value, with intense psychological impact. For example, terrorist groups in the Middle East have kamikaze drones were used to attack government or military installations, causing both Material destruction as well as the intimidating effect on the population. The *State Violent Drone Use* report.



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in the Middle East points out that the proliferation of this type of attack challenges the norm that only States possess such capacity. Based on the International Centre for Counter-Terrorism (ICCT), The use of drones as a means of precision attack allows terrorist groups to hit targets. vital operations without the need for a direct presence on site, increasing the lethality of operations and the ability to easily hit high-value targets (ICCT, 2022).

In addition to direct offensive tactics, a strategic logistical use is identified: the use of Drones are used for smuggling and pre-positioning materials. This method allows for... Transporting weapons or explosives to hard-to-reach locations or controlled zones. by allied factions, functioning as an advance preparation that drastically reduces the Physical exposure of the criminals at the time of the action.

Evolving from this logistical support to complex operations, the use of [unclear - possibly "services" or similar] becomes consolidated. combined vectors in three distinct phases: (1) prior reconnaissance and surveillance of the target; (2) execution of the attack with the launching of lethal devices; and (3) support for extraction or cover. escape. As detailed in the study "*Defense and Security Challenges in the Face of the New Threat of...*" *Illicit use of UAVs*; this integration requires high levels of planning, intelligence, and... Coordination. The convergence of these employment methods confirms a clear trend: the drone. It transcended its auxiliary function of espionage to definitively establish itself as a weapon. accessible, precise and lethal in the arsenal of non-state actors (Brazil, 2022).

4.2.3 Tactical advantages: remote attack, reduced risk for the aggressor, difficulty of tracking. The use of drones with

explosive charges is consolidating itself as a tactical innovation that... It redefines the logic of confrontations, primarily through the remote attack capability that preserves the operator. Technically, multirotor models (quadcopters to octocopters) offer flight Stationary, precise navigation, and payload compatible with improvised devices. A The criminal appropriation of these commercial platforms is facilitated by their wide availability. market, operational autonomy and low learning curve for piloting (AUAV, 2021; Nagel, 2025).

The logic of remote attacks has already been observed in different conflict zones. The report of The International Centre for Counter-Terrorism (ICCT) demonstrates that groups such as Hezbollah, Hamas, Houthi, Islamic State and PKK use drones for attacks with grenades or other explosive devices. improvised, projecting force from retreating positions and eliminating the need for direct exposure of combatants (Archambault, 2022). The war in Ukraine also consolidated This trend: several records show multirotors launching grenades accurately over trenches and military vehicles, which proves the lethal potential of these low-cost devices. (Teixeira, 2025).



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In Brazil, a similar phenomenon was observed during the mega-operation in the Complex of Penha, Rio de Janeiro, October 28, 2025. Reports from *CNN Brasil* (CNN BRASIL, 2025), *Gazeta do Povo* (GRANDI, 2025) and *El País* (EL PAÍS, 2025) confirm that members of Comando Vermelho used drones to launch grenades against police officers. Images released. *CNN* reports show the moment an explosive device is thrown from a drone during the... confrontation, highlighting that the technique is no longer limited to aerial monitoring, but has already... It has become a direct offensive platform. *Gazeta do Povo* itself reports that drones equipped Explosives were used to delay the advance of troops, expanding territorial control. exercised by the faction.

This type of operation provides the second fundamental tactical advantage: reduction of risk for the aggressor. As Veilleux-Lepage and Archambault (2022) argue, groups Armed forces perceive the drone as a "consumable," replaceable and inexpensive when compared to the potential loss. of experienced combatants. This logic was also highlighted in Brazil during the analysis of mega-operation. In an interview with *Exame*, the president of ADEPOL stated that the use of drones with Grenades, inspired by techniques from the war in Ukraine, "scales the power of crime" because it reduces the exposure of criminals, while at the same time increasing the risk for police teams (Teixeira, 2025).

The third tactical advantage lies in the complexity of tracking and neutralizing these Equipment. Small drones are characterized by low thermal and acoustic signatures. Reduced radar cross-section and low-altitude flight make it challenging for conventional surveillance. Isolated detection technologies — such as acoustic sensors, microwave radars, or radio frequency — prove insufficient against multirotors, requiring the integration of Multiple sensors assisted by machine learning algorithms . This The technological gap consolidates an asymmetric advantage, allowing criminal organizations to oppose low-cost vectors to costly and complex state defense systems (Rahman *et al.*, 2024).

In the Brazilian context, this tactical effectiveness is amplified by population density and The irregular geometry of the favelas, where physical barriers and ambient noise favor low-level flight and... Acoustic masking. Data from operations in the Penha Complex corroborate this advantage. Asymmetric: Security forces reported an inability to detect the vector or locate the operator. before the payload is released. The drone therefore acts as a 'force multiplier', amplifying The offensive reach is reduced while minimizing risks to the aggressor, which makes the state response slow and costly. (Teixeira, 2025).

In summary, the tactical advantages, remote attack, reduced risk, and difficulty of tracking, These are not mere theoretical projections. They are characteristics observed empirically, both in conflicts.



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international events, as well as recent events in Rio de Janeiro in 2025. These factors demonstrate that the adoption of drones with explosives enhances the offensive capabilities of factions, alters the It balances police operations and poses new challenges to traditional visible policing.

4.3 State response and actions of security forces

The escalation of violence involving the use of explosives in Brazil has forced the forces to... Security necessitates a doctrinal restructuring. Addressing this issue... Criminality cannot be understood solely from the perspective of armed confrontation, but rather as a Critical Incident Management System. According to Lemos (2017), the state response should to be guided by technicality, where the preservation of life (of hostages, innocents and their own) is paramount. (agents) takes precedence over the preservation of property and the immediate arrest of the perpetrators.

The doctrine of bomb disposal operations states that the success of the operation is determined by... The first few minutes were marked by the actions of the "first responder" (visible police). Standard Operating Procedure of the Military Police of Amazonas (2022) and national doctrine They converge on the "Three No's" rule (Do not touch, Do not move, Do not remove), but the complexity The performance goes beyond that.

Isolating the site is not a static measure, but a dynamic one, based on the establishment of Safety Zones:

- Hot Zone : Area of immediate risk where the device is located or where the incident occurred.
The detonation. Only explosives technicians (EODs) wearing anti-fragmentation suits may enter.
At this point, Sales and Januário (2024) emphasize that operational safety depends intrinsically dependent on the rigorous maintenance and technology of this equipment, without which the The approach becomes unfeasible.
- Warm Zone: Decontamination and tactical support area, where the Post is located.
Advanced Command.
- Cold Zone: Secure area designated for the press, authorities and support vehicles (LEÃO, 2016).

Incorrectly defining these perimeters can be fatal. Leão (2016) warns of the risk of Secondary artifacts — bombs intentionally left by criminals to target police officers. who arrive to respond to the first explosion. Therefore, the minimum distance of 90 to The 100 meters recommended in the manuals is not just a formality, but a mitigation measure. against the effects of overpressure (shock wave) and shrapnel.

After the threat is neutralized by the Bomb Squad — which can occur via manual deactivation, use of disruptor cannons or controlled detonation —, a phase begins



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A crucial but often overlooked aspect: post-explosion forensic investigation.

Unlike a typical crime scene, the site of an explosion is chaotic and scattered.

The collection of chemical traces and fragments of the artifact is what allows the identification of the signature of explosive (whether it be diverted commercial dynamite or military-grade plastic explosives). The Ordinance Brazilian Army COLOG No. 147 (2019) instrumentalizes this investigation through control. Strict control of products. Traceability guaranteed by the Explosives Control System. (SICOEX) aims to identify the origin of the seized or detonated batch.

However, there is a logistical challenge: enforcement at the point of contact. Although the regulation requires it. Armed security and monitoring in warehouses and quarries, the capillarity of civil works in the interior. The country's system facilitates the diversion of emulsions and primers, which end up supplying the illicit market. "New Cangaço".

A repressive response (police force) is insufficient without preventative intelligence. The modus operandi of bank robbery gangs requires months of planning, route mapping, and acquisition of materials. It is during this timeframe that intelligence must come into play. Cooperation between the Brazilian Federation of Banks (FEBRABAN) and the Federal Police, according to 2016 data, This demonstrated that sharing images and information about the agencies' routines allowed... a 57% reduction in attacks in São Paulo during that period (FEBRABAN, 2016).

The modern strategy focuses on financial strangulation (follow the money) and "toughening up". "Target hardening," which consists of installing devices that render banknotes unusable in case of... explosion (inking), discouraging criminal activity due to the economic unfeasibility of profit.

Feitoza and Alves Junior (2020) demonstrate, through data compiled between 2013 and 2017, The destruction of agencies generates a ripple effect on the local economy. When an agency is Once destroyed by explosives, reconstruction can take months or, in many cases, may not happen at all. This leads to "forced disintermediation." Retirees and public employees have to travel to withdraw their money. proceeds in neighboring cities. The withdrawn money tends to be spent at the place of withdrawal, and not in the city of origin, draining the liquidity of the attacked municipality. Small local businesses, which They depend on the flow of circulating cash, face a drop in revenue and closures. highlighting that the bomb attack is a severe blow to regional development.

From a sociological perspective, Aquino (2020) introduces the concept of "violence Performative." Unlike the traditional thief who seeks to act stealthily in the dead of night, the Criminal organizations of the "New Cangaço" seek visibility. The use of explosives does not serve this purpose. just to open the safe; it serves as a "signature of power." The sound of the detonation, added to the rifle shots fired into the air and the use of hostages as human shields, it makes up a A staged war intended to humiliate the local state force and paralyze society through panic.



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Aquino (2020) describes the scenario of "besieged cities," where the sovereignty of the State is temporarily suspended and replaced by the dominance of the criminal group. This psychological impact Among the population, the constant fear that the city will become a battleground again is a social harm. immeasurable and difficult to repair.

5. Final considerations

This article systematically analyzes how the use of drones associated with The use of explosive devices by criminal organizations represents a significant shift in patterns. contemporary instances of violence, both internationally and within the Brazilian context. This type of criminal activity expands the offensive capacity of the factions, introducing a aerial dimension to the conflict, reducing the direct exposure of the aggressors and making it more difficult. significantly impacted the state response. The results confirm the initial hypothesis that integration From UAVs to the explosive arsenal of criminal organizations, this represents a qualitative leap in... The strategic rationality of violence requires profound adaptations in planning and doctrine. and in the actions of public security forces, especially the Military Police.

Regarding the limitations of the research, it is noteworthy that the study did not involve the It did not use human beings, animals, or personal data, nor did it collect data. primary sources. The investigation was limited to the analysis of bibliographic sources, normative documents, Institutional reports and open access public records, as provided for in Resolution No. Resolution 510/2016 of the National Health Council. For this reason, there was no need to submit the project to a Research Ethics Committee, which, although ensuring ethical compliance, limits the direct empirical deepening of internal operational practices of security forces and on subjective perceptions of agents involved in this type of confrontation.

Despite these limitations, this work makes a significant contribution to safety. This study is aimed at the public and, in particular, the Military Police. It systematizes dispersed knowledge. Regarding the illicit use of drones with explosives, it articulates theoretical frameworks from criminology, The sociology of violence and criminal law, and it engages in dialogue with operational police doctrine. In this way, it offers theoretical and analytical support for doctrinal updating and improvement. critical incident management and strengthening police intelligence in the face of emerging technological threats, contributing to the production of applied knowledge in Brazilian operational realities.

Regarding possibilities for future studies, a wide field of... This area of research is still relatively unexplored. Empirical research involving case studies. in-depth studies, interviews with security operators, comparative analyses between states Brazilian or inter-country, as well as technical studies on detection and neutralization systems.



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The use of drones could broaden our understanding of the phenomenon. Furthermore, investigations focused on... regulation of the use of UAVs, interagency cooperation, and the role of financial intelligence in Tracking these criminal practices constitutes a promising agenda for the advancement of scientific and institutional knowledge.

Finally, to improve the actions already developed in addressing the use Drone criminals highlight the need for continuous investment in technical training. of the police forces, in updating Standard Operating Procedures and in integration between air and ground intelligence systems, as well as strengthening cooperation interinstitutional. The importance of adopting specific technologies for this is also highlighted. detection of UAVs, preventive monitoring of sensitive areas, and the incorporation of this an emerging threat in operational planning. Therefore, addressing this new... The configuration of violence demands an equally innovative state response, based on qualified intelligence, up-to-date doctrine, and a high capacity for adaptation in the face of constant change. evolution of strategies employed by organized crime.

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