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From Crime–Terror Convergence to Hybrid Violence: Drone Attacks in Latin America

Abstract

This article analyzes the use of Unmanned Aerial Systems (UAS) as instruments of “hybrid violence” due to their employment by non-state actors in Latin America, particularly in Colombia, Mexico, and Brazil. Between 2020 and 2026, criminal organizations with economic or politico-economic motivations have used these systems for the delivery of explosive devices, surveillance, and territorial control, challenging state authority and affecting public security conditions in these countries.

Drawing on Makarenko’s *Crime-Terror Continuum* model, the article examines empirical cases through academic literature, intelligence reports, and media sources to identify patterns of tactical adaptation, key characteristics, and the current state of the phenomenon. In this regard, the study suggests the emergence of a threat capable of reducing traditional state tactical advantages, including through the use of fiber-optic-guided drones that are resistant to electronic jamming, as well as the potential deployment of chemical agents.

Keywords: drones, security, Latin America, crime-terror continuum, hybrid threat, territorial control, criminal innovation

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1. Introduction

For decades the use of drones was confined almost exclusively to the state military domain, as means of reconnaissance and attack. In recent years, however, this technology has been progressively incorporated by non-state actors into their repertoires of violence. This phenomenon constitutes a criminal innovation, in that it combines the use of readily accessible technologies, artisanal modifications, and the projection of violence from aerial space, thereby representing a security challenge for Latin America.

Diverse non-state armed actors, such as the drug-trafficking cartels in Mexico and the dissident factions of the Revolutionary Armed Forces of Colombia (FARC), have integrated drones into their operational tactics, primarily for the launching of improvised explosive devices against law enforcement and security forces, rival groups, and even the civilian population. These incidents, frequently documented since 2020, evidence a significant risk to public security, as they imply the adaptation of these armed actors through the use of devices that are accessible and low-cost.

Far from completely replacing other modalities of violence such as the use of car bombs, armed ambushes, or attacks with firearms, the employment of drones is added to an expanded tactical repertoire, offering operational advantages: the possibility of executing attacks at a distance, reduced direct exposure of the operators, and a high psychological impact upon security forces and affected communities. In this sense, the drone must not be understood solely as a technical instrument, but as symbolic coercion, intended to exhibit power, exercise territorial control, and demonstrate the capacity to challenge the state.

From a theoretical perspective, these dynamics fit precisely within the crime–terror continuum model¹ proposed by Makarenko (2005), which describes the progressive convergence between organized crime and terrorism. The use of drones by criminal organizations and armed dissidents illustrates how these actors adopt tactics that are traditionally proper to political violence and terrorism, yet with economic motivations, giving rise to hybrid configurations of violence. Cases such as the drone attacks of the Jalisco New Generation Cartel (CJNG) against police forces in Mexico, or those of the FARC dissidents against military and police units in Colombia, reflect this operational and symbolic convergence, in which terror and criminality intertwine to exercise territorial control and erode state authority.

The employment of drones by armed actors in Latin America constitutes the manifestation of a deep structural convergence. In this phenomenon material capacities converge, derived from the easy acquisition of commercial technology, together with a strategic rationality that seeks to maximize tactical damage with the minimum personal risk, which is made possible by remote attacks. Nevertheless, the technological dimension is insufficient to explain the phenomenon without

1 The Crime-Terrorism Continuum Model describes a dynamic relationship in which organized crime and terrorism are not separate phenomena, but coexist on a continuous spectrum based on their methods and motivations; they can therefore converge through tactical alliances, mutual appropriation of techniques, or even transform into one another.

considering the recourse to violence as the articulating axis and instrument of psychological coercion. This evolution is especially relevant in contexts of low state capacity, where technological innovation combines with governance voids and high levels of structural violence.

To examine this dynamic, the present work focuses on the temporal framework spanning 2020 to 2026 –the period in which an exponential and documented increase in explosive drone attacks would be recorded in the region– analyzing the situation of Colombia, Mexico, and Brazil, as constituting the most representative scenarios of this phenomenon.

2. Development

2.1 Makarenko's Crime–Terror Continuum: Hybrid Violence

One of the central contributions of Makarenko's crime–terror continuum (2005) is the idea that organized crime and terrorism should not be understood as rigid normative categories, but as forms of non-state violence susceptible of converging under certain structural conditions. Within this framework, non-state actors adopt tactics, structures, and narratives traditionally associated with the other spectrum when this proves functional to their strategic objectives. This logic makes it possible to explain why contemporary criminal organizations, even in the absence of a concrete ideological project, resort to forms of high-impact symbolic violence, such as reiterated attacks against security forces, that have historically been associated with terrorism, as a rational adaptation in contexts of territorial dispute, state fragmentation, and armed competition (Makarenko, 2005; InSight Crime, 2023).

Without limiting the foregoing, it must be clarified that not every high-impact attack should be considered terrorist, since the psychological effect or intimidation alone do not suffice to classify it as terrorism; therefore, the employment of drones is understood as a tool of coercion that enriches a broader tactical repertoire.

In Mexico, the method of action of the Jalisco New Generation Cartel (CJNG) constitutes one of the most evident examples of displacement along the continuum described by Makarenko. Although its central motivation is economic, multiple journalistic investigations and specialized observatories have documented how the CJNG has systematically incorporated tactics proper to armed political violence: attacks against police and military personnel, use of improvised explosives and drones, coordinated blockades of infrastructures, and deployments of violence with a strong communicative charge (InSight Crime, 2022; Villegas, 2025). Following the death of one of its regional leaders, far from an organizational withdrawal being observed, coordinated violent actions occurred in order to reaffirm territorial control and demonstrate its capacity for coercion, thereby reinforcing a logic of instrumental terror oriented toward state deterrence and political messaging, and not solely toward criminal retaliation (InSight Crime, 2021).

Meanwhile, Colombia represents a paradigmatic case of the inverse trajectory envisaged in Makarenko's model, in which an organization of insurgent origin progressively transitions toward criminal structures without completely abandoning political violence. As Makarenko herself anticipated (2005) in her original analysis of the FARC, growing dependence on illicit economies does not necessarily imply renunciation of terrorist tactics when these continue to offer strategic advantages.

The FARC dissidents have consolidated their insertion into networks of drug trafficking, illegal mining, and extortion, yet simultaneously have executed systematic attacks against the public force, including the use of explosive-laden drones, a practice documented by national media and specialized reports since 2021 (BBC Mundo, 2022; InSight Crime, 2024). This combination of criminality and symbolic violence reflects a permanent hybrid configuration, rather than a transitory phase.

Regarding the foregoing, a difference between the dissidents and their predecessor is that "both organizations seek territorial control; however, the former FARC-EP intended to fulfil its strategic plan by expanding into fronts and generating a social base in order to achieve its objective, which was the seizure of power, whereas the dissidents seek to conquer territories for the existence of illicit economies or strategic corridors" (García & Hernández, 2024).

In this sense, the armed forces and the police of Colombia currently confront a complex strategic scenario, characterized by the persistence of residual insurgency, the intensification of illicit economies, and the consolidation of hybrid threats, with armed groupings such as the FARC, the ELN, and the Clan del Golfo (Ríos, 2025).

These armed groups could be understood under the categorization of "hybrid threat", considering that "the hybrid has undergone a long conceptual journey from its origins to the present day. Heir to the concept of complex-irregular warfare, this idea became popular after the clash between Israel and Hezbollah in 2006 to describe the integration of conventional and irregular tactics, techniques, and procedures, mixed with terrorist acts, propaganda, and connections with organized crime" (Colom, 2019). From this perspective, concepts such as "hybrid threat" or "terrorist tactics" are descriptive categories for examining the functional adoption of intimidatory dynamics by criminal organizations.

Meanwhile, the Brazilian case further reinforces the validity of the continuum by showing how "strictly criminal" actors can adopt quasi-political practices, without the need to articulate a formal political or ideological agenda. Organizations such as the Comando Vermelho and the Primeiro Comando da Capital have consolidated enclaves of territorial control in favelas, where they regulate illicit economic activities, impose social norms, and exercise armed coercion in the face of state presence (InSight Crime, 2022; The Guardian, 2021). From the perspective of the crime-terror continuum, these groups do not transform into terrorist organizations with respect to their motivations, yet they assimilate repertoires of collective intimidation and social disciplining that fulfil functions analogous to those of terrorism, especially when attacks are directed against police forces as visible symbols of the state and of its formal authority.

Taken together, these Latin American examples confirm the empirical validity of the proposed analytical framework and suggest the need to employ it in order to interpret contemporary forms of hybrid violence, characterized by the superposition of economic, political, and symbolic rationalities. The use of drones by criminal organizations and armed dissidents must not be understood solely as a technological innovation, but as an indicator of position within the crime–terror continuum, in which the adoption of terrorist tactics responds both to operational incentives and to objectives of territorial control, violent legitimization, and open challenge to state authority (Makarenko, 2005; InSight Crime, 2023).

In this sense, to the operational and technological aspects is added a less visible yet equally relevant dimension: the social, cultural, and symbolic context in which these attacks occur. As Crespo (2018) notes, violence against security forces cannot be explained solely as a tactical or reactive decision, but as the result of prior processes of social radicalization and consolidation of subcultures of violence that legitimize aggression against the state agent. In territories where police or military presence is perceived as a form of occupation, provocation, or oppression, a symbolic framework is configured that facilitates the dehumanization of the “state other” and its conversion into a legitimate target of violence. This sociocultural environment is key to understanding why sophisticated attacks—such as the use of explosive drones—can be deployed repeatedly without necessarily generating a social rejection proportional to the impact they produce.

2.2. *Use of Explosive-Laden Drones by Armed Groups in Latin America*

In territories where illicit economies (drug trafficking or illegal mining) generate financing for armed groups, drones function as a tool of “criminal sovereignty”, representing a challenge to state security in the three countries analyzed.

The tactic of executing attacks by means of improvised explosive devices (IEDs) employing drones has intensified in Latin America as part of the adaptation of non-state actors to a technological environment of high availability and low cost. In Colombia and Mexico –and increasingly in other countries– the drone consolidates itself as an offensive and harassment platform, with the capacity to project violence at a distance and to alter the operational routines of state forces and rival groups (De Lorenzo de Guindos, 2026; Ginn & Goodwin, 2025). In comparative terms, the pattern is not uniform: in Colombia the incentives combine political and economic components (with predominance of the latter), whereas in Mexico the rationality is linked predominantly to the control of criminal markets and strategic territories (Heise, 2025; Institute for Economics & Peace, 2026).

Beyond motivations, a key convergent element exists: the drone attack functions as an instrument of intimidation that generates psychological effects disproportionate to the immediate physical damage, eroding the adversary’s morale through the persistent threat from the air. In Mexico,

the deployment of “droneros” (drone operators) and the use of droppers (drones that release payloads) has contributed to installing a perception of constant vulnerability in disputed territories, affecting both opponents and civilian communities (De Lorenzo de Guindos, 2026; Heise, 2025). In Colombia, the diffusion of the buzzing of drones in conflict zones and the expansion of attacks documented by the press and strategic reports reinforce their function as a tool of symbolic coercion and territorial control (Heise, 2025; Institute for Economics & Peace, 2026).

At the operational level, drones enable these actors to access and attack objectives situated in areas where terrestrial approach would be slower, riskier, or more easily interceptable. Their utility lies in reducing the direct exposure of operators, expanding tactical reach, and facilitating opportunity attacks against patrols, convoys, and infrastructure, while maintaining the initiative at relatively low costs (Heise, 2025; Ginn & Goodwin, 2025). Although limitations exist –flight autonomy, payload, vulnerability to inhibitors or layered defense– the cost-impact balance favors their adoption, especially when commercial devices are combined with artisanal adaptations, cumulative learning, and logistical networks for the supply of components (De Lorenzo de Guindos, 2026; Ginn & Goodwin, 2025).

Meanwhile, in Brazil indications are observed of the incorporation of the drone as a resource of violence in urban conflict environments, associated with the armed escalation of criminal organizations with territorial control in favelas. For example, the use of drones by the Comando Vermelho is reported during² Operation *Contenção* in Rio de Janeiro in October 2025, which left 122 dead (Folha de S.Paulo, 2025), suggesting the regional diffusion of this innovation toward scenarios of organized criminality with high firepower and local criminal governance (De Lorenzo de Guindos, 2026).³ This case is analytically relevant because it transfers the problem from the rural dispute (drug-trafficking corridors and peripheral control) toward the dense urban space, where the psychological impact and the risk of collateral damage may be amplified.

Likewise, outside the three countries mentioned the drone also begins to appear as a resource in contexts of state crisis and gang violence, as in Haiti, where drone operations are recorded within the framework of governmental actions against gangs, together with explicit threats of response by gang leaders by means of their own drones, within scenarios of extremely fragile governability (De Lorenzo de Guindos, 2026; Ginn & Goodwin, 2025). Taken together, these cases show that the adoption of drones is not an isolated phenomenon, but part of a regional transformation of non-state repertoires of violence, with impact upon public security and the protection of security forces and critical infrastructure (Institute for Economics & Peace, 2026; Ginn & Goodwin, 2025).

2 The operation was named “*Contenção*”.

2.3 Tactical Adaptation as a Hybrid Threat

The principal motivation of the groups operating in Mexico and Colombia would be to exercise territorial control, in terms of the deployment of power in specific zones in order to develop their illicit operations, preventing the state from imposing its authority in those territories; therefore, drone attacks are also a demonstration of power, intended to generate influence through intimidation. From this perspective, the tactical innovation of drone use is framed within a phenomenon of non-state actors that possess a high level of hierarchical organization, with capacities that can impact the condition of governability and exercise territorial control in order to carry out their criminal operations, so that these actors come to represent criminal insurgencies (Bustamante, 2020).

On the basis of the foregoing, drone attacks generate effects comparable to those of terrorist tactics, inasmuch as their offensive use transcends punctual attacks and direct victims, producing a climate of fear and psychological impact. In this sense, “what distinguishes acts of terrorism from other types of violent action is their capacity to provoke an intense psychological and social impact (anxiety or fear) disproportionate to the physical damage inflicted upon the persons or objects chosen as the target of the aggression” (De la Corte, 2013).

These criminal insurgencies employ this method of attack, of a terrorist type, within the framework of a broader range of actions, configuring a hybrid threat, whose concept, although it has different interpretations, implies the employment of conventional and irregular means, together with the perpetration of terrorist attacks, the deployment of propaganda, and the exploitation of the adversary’s weaknesses in order to exercise power and coercion (Colom, 2019).

Hybrid threats imply the use of different tactics, including military ones, a situation that is applicable to the cases analyzed. In Colombia, despite the 2016 peace agreement, the armed conflict persists with actors that employ guerrilla and terrorist tactics; meanwhile, the Mexican cartels are organized-crime groups that possess specific capacities, even proto-insurgent ones, through the use of guerrilla tactics. Likewise, in both cases there is use of cyberspace and disinformation, whose application as a whole generates destabilization and the possibility of eroding social cohesion, weakening institutions, terrifying populations, and exercising territorial control (Ortiz, 2015). Although it is not a conventional “military invasion”, one is unequivocally in the presence of a multidimensional phenomenon with impact upon political systems.

Criminal groupings employ drones for purposes that range from the propagandistic to the tactical-offensive, the latter dimension corresponding to attacks against personnel and infrastructure of security forces, rival groups, and the civilian population. In addition, they can conduct aerial reconnaissance for surveillance and attack planning, transport small quantities of drugs into penitentiary centers, but above all exercise fear, for example, by recording videos of attacks for subsequent dissemination on the internet.

2.4 Drone Attacks in Colombia

Drone attacks present a direct symmetry with the cartography of illicit economies, specifically those related to the routes of production, processing, and trafficking of drugs, as well as illegal mining. The departments in which the deployment of this technique has been concentrated include Cauca, Norte de Santander, Arauca, Guaviare, Tolima, Cesar, Valle del Cauca, and Putumayo (Torrado, 2025; Cifuentes, 2025b). In the north-east of the country, the department of Norte de Santander—particularly the Catatumbo sub-region—has established itself as an epicenter of confrontation. In this zone, the “33rd Front” of the FARC dissidents and the ELN have waged a violent territorial dispute for control of the trans-border routes toward Venezuela (Bonilla, 2025a; Torrado, 2025).

In the south-west, departments such as Cauca and Valle del Cauca have suffered attacks by the “Estado Mayor Central”. In Cauca, structures such as the Bloque Occidental Jacobo Arenas and the Frente Carlos Patiño have used drones to secure control over the Micay Canyon, a fundamental enclave for cocaine processing (Torrado, 2025). For their part, Arauca, Guaviare, and Putumayo function as zones of strategic rearguard and export corridors, where denial of airspace hinders eradication efforts and state control.

The use of these devices in the Colombian conflict has transitioned from an experimental phase to a state of “technical-military maturity”. Initially, the armed groups adapted commercial and recreational drones to drop rudimentary explosive devices, such as PVC cylinders loaded with ammonium nitrate and shrapnel (Bonilla, 2025a). However, the ELN and the FARC dissidents have drastically increased investment in technology in order to achieve greater precision and lethality (Cifuentes, 2025b). The search for greater certainty has led criminal organizations to recruit specialists in programming and remote piloting, forming “drone-operator schools” in zones such as the Pacific and Cauca (Bonilla, 2025a).

Likewise, in response to the implementation of radio-frequency inhibition systems (jammers) by the state, the armed actors have initiated a phase of technological adaptation through the importation of fiber-optic-guided drones. This innovation, which Cifuentes (2025b) links to transnational technological flows originating from Iran via Venezuela, ensures a command, control, and real-time video link that is absolutely immune to electromagnetic countermeasures, so that the criminal groups “remain one step ahead”. Additionally, another critical aspect is the reconversion of high-capacity agricultural drones for the dissemination of chemical agents (Torrado, 2025). This tactic not only possesses a dimension of “small-scale chemical warfare”, but eventually saturates emergency-response capacities and, moreover, violates the fundamental principles of International Humanitarian Law, maximizing psychological terror through the invisibility of the attack.

To dimension the current asymmetric threat, it is imperative to analyze events that evidence the technical sophistication and capacities of the National Liberation Army (ELN) with the use of drones. A critical milestone occurred on 20 July 2025 in the municipality of El Carmen, Norte de

Santander, where troops of the Vulcano Task Force of the National Army were attacked at a military base by means of explosive-laden drones. The toll of this attack, three professional soldiers killed and eight military personnel seriously wounded, not only represents a human tragedy, but marks a turning point in the capacity of non-state actors to breach protected military enclaves (Cifuentes, 2025b).

From this incident it is necessary to note that it constituted a coordinated operation involving “airspace saturation”, which implies the existence of a command that coordinates and that planning would have occurred, considering furthermore that this technique allows that if one or two drones are intercepted another may still strike the target.

Regarding the foregoing, this event, attributed to the ELN, evidenced the vulnerability of the state’s security forces and the capacity of the armed groups to conduct “saturation operations”. The precision and operational success of the attack suggest a process of training and knowledge transfer that surpasses empirical learning and even opens the possibility that Latin American insurgent groups are adopting combat manuals from conflicts such as those of the Middle East.

Subsequently, another incident occurred on 21 August 2025 in the rural zone of the municipality of Amalfi, in the department of Antioquia, where a National Police helicopter was shot down by a drone attack in which 13 police officers died. The aircraft was heading to support a group of personnel engaged in manual eradication of illicit crops in the area (Ávila and Cueto, 2025b). The attack exposed shortcomings of anticipation, since intelligence reports had allegedly warned of the intention of criminal groups to attack aircraft in the zone. Although initially the authorship generated confusion, the Frente de Guerra Darío Ramírez Castro of the ELN claimed responsibility for the attack by means of a video on social networks on 4 September 2025 (Bernal, 2025a). This event stands out in the Colombian conflict, confirming that the armed actors now possess a real capacity for “anti-aircraft defense”, drastically limiting the state’s traditional superiority in low-altitude airspace.

As Cifuentes (2025a) sets out, in order to confront this threat, the authorities have invested in military anti-drone technology originating from Canada and Spain. The institutional response has been articulated mainly around two major fronts: the acquisition of massive defensive systems and the development of own offensive platforms. In the defensive sphere, the National Government implemented the “National Anti-Drone Shield Project”. With an investment exceeding 1.680 million dollars, this strategy seeks to deploy early-warning radars and inhibition systems in strategic garrisons, refineries, and the Casa de Nariño (Bonilla, 2025b). In the offensive sphere, the Colombian Aeronautical Industry Corporation (CIAC) developed the DRAGOM drone (Guided Reconnaissance and Attack Drone for Military Operations). This device possesses more than 90 minutes of autonomy, capacity to transport payloads of up to 10 kilograms, high-definition cameras, and a dual encrypted and satellite communication channel, permitting tactical intelligence and the execution of precise attacks with explosives (Cifuentes, 2025a).

Nevertheless, the efficacy of these measures has been severely questioned. As Bonilla (2025b) rightly argues, the response of the Colombian state has been late and fragmented. Technical and strategic analysis expose a fundamental disconnection between the capacities acquired and the operational reality of the conflict, because, in the first place, the static inhibition systems of the National Shield are designed principally to protect critical infrastructures in urban or semi-urban environments, leaving unprotected the jungle areas where the conflict is actually fought, since the state argues that it lacks the capacity to equip with inhibitors the more than 3.000 platoons deployed (Bonilla, 2025b; Torrado, 2025); in the second place, state bureaucracy presents a temporal lag vis-à-vis insurgent innovation, given that while the state requires lengthy procurement processes, the armed groups succeed in overcoming these defenses rapidly by changing frequencies, flying autonomously, and adopting fiber-optic-controlled drones.

The Colombian conflict has entered the era of unmanned aerial warfare. The capacity of these organizations to shoot down state aircraft and penetrate military bases demonstrates a level of sophistication that nullifies the traditional logistical advantages of the military forces. Likewise, the dissemination of chemical agents, the use of fiber optics to evade inhibitors, and surgical precision configure a panorama of highly complex asymmetric threat.

2.5 Drone Attacks in Mexico

In Mexico, the struggles among drug cartels have led them to seek new forms of deploying violence in order to exercise territorial control and predominate in the illicit business; consequently, they have incorporated “Claymore mines, rocket-propelled grenades, mortars fabricated from petrol-tank tubes, and armored trucks equipped with heavy machine guns. They are burying improvised explosive devices to kill their rivals and modifying drones purchased online to convert them into attack drones loaded with toxic chemical substances and bombs” (Villegas, 2025).

In this context, the tactic of explosive attacks using drones is employed by the drug cartels against other cartels, but also against the police and the army. Indeed, these attacks have left military personnel dead. This tactic is used principally by the Jalisco New Generation Cartel (CJNG), Sinaloa, and La Familia Michoacana cartels in Michoacán, Chihuahua, and Guanajuato (Jaramillo, 2025).

The explosive devices are of homemade manufacture. In fact, “the casings are usually made from plastic bottles, cut drainpipes, and even fire extinguishers. Steel, glass, and plastic fins are fitted to the devices to stabilize them during flight. Inside they contain homemade gunpowder and ammonium nitrate mixed with fuel, an explosive frequently used in mining and construction” (Villegas, 2025).

The CJNG is regarded as the precursor in Mexico of this modality; it currently even possesses a cell dedicated to this task, under the designation of “drone operators”, with a military style and the use of tactical attire. However, “security analysts and Mexican officials note that the cartels began

to militarize in the mid-2000s, when Los Zetas, a group formed by former members of the army, introduced battlefield discipline, encrypted communications, and heavy weaponry into organized crime” (Villegas, 2025). “The CJNG began to employ explosive-laden drones in Michoacán around 2020, using them in attacks against rival groups and local communities. Over time, this tactic was replicated in Guerrero by La Familia Michoacana, which has resorted to these devices to strengthen its territorial dominion and expand its influence” (Jaramillo, 2025).

These groups are reported to have acquired knowledge from military experience: “additionally, Mexican criminal groups have turned to the experience of former Colombian military personnel in order to improve and professionalize the adaptation of explosives on drones” (Jaramillo, 2025).

Regarding the origin of the drones, these are acquired commercially but adapted to carry and release explosive devices; nevertheless, more sophisticated explosive drones may also have been acquired abroad.

In April 2024, in Michoacán, the CJNG used drones to launch explosive devices containing chemical substances whose gases are reported to have produced effects on the respiratory tracts of the inhabitants of the zone, similar to the incidents that have been reported in Colombia (Jaramillo, 2025).

2.6 Drone Attacks in Brazil

The proliferation of Unmanned Aerial Vehicles (UAVs) in the Brazilian organized-crime ecosystem has radically transformed the dynamics of urban violence and public security (Pyatakov, 2025), owing to the appropriation and modification of commercial drones by groups such as the Comando Vermelho (CV), the Primeiro Comando da Capital (PCC), and the Terceiro Comando Puro (TCP) (Portal CIP, 2025).

Although the first documentations of weaponized “narco-drones” emerged on the Mexico-United States border at the hands of cartels such as the Jalisco New Generation Cartel (Diálogo Américas, 2023), the threat has expanded geographically, and Brazil has consolidated itself as a critical epicenter of this escalation (Pyatakov, 2025). In a context marked by the historical militarization of urban space and the metaphor of war in the management of the favelas (Leite, 2012), Brazilian criminal organizations have incorporated aerial dominion in order to evade the traditional terrestrial perimeters of the security forces and to project three-dimensional territorial control (Portal CIP, 2025).

Current operability can be classified into three categories: in the first place, Intelligence, Surveillance, and Reconnaissance (ISR) tasks stand out, carried out by actors such as the PCC, the CV, and the TCP to map police deployments, monitor authorities of the justice system, and identify vulnerabilities through the incorporation of thermal and infrared cameras and autonomous-flight

software (Portal CIP, 2025; Pyatakov, 2025). In the second place stands logistics and infiltration, operated principally by prison factions and port networks for the smuggling of narcotics, weapons, and communication devices by means of cargo drones equipped with release mechanisms (Pyatakov, 2025; Portal CIP, 2025). In the third place is narcoterrorism, led by the CV and the TCP, focused on “aerial bombing” with improvised explosive devices and grenades against rivals, civilians, and police, availing themselves of adapted electromechanical claws and first-person-view systems (InfoMoney, 2024; Pyatakov, 2025).

The transition of drones to platforms of lethal attack has altered the balance of the urban conflict in Brazil, given that, for example, it is possible to release grenades without the safety pin directly onto terrestrial targets (InfoMoney, 2024). Territorial fragmentation among the Comando Vermelho, the Terceiro Comando Puro, and paramilitary groups has precipitated an “aerial arms race” (The Dialogue, 2024). Police records indicate that systematic weaponization began during territorial disputes when the TCP, under the leadership of traffickers, started to use drones to bomb areas dominated by the CV (InfoMoney, 2024). In a documented incident that illustrates the indiscriminate nature of these attacks, a grenade was launched from a drone onto a public square in which children were playing, generating mass panic and profound psychological terror in the community (Band Jornalismo, 2024).

Attacks have also been directed frontally against the state. On 28 October 2025, within the framework of “Operation Contenção”, executed in the complexes of Penha and Alemão, the CV used drones to launch explosive devices onto agents of the Special Resources Coordination of the Civil Police (G1 Rio, 2025), an incident that the governor classified as “narcoterrorism” (G1 Rio, 2025).

Investigations further reveal a dangerous overflow of tactical knowledge from military institutions toward organized crime. In September 2024, the Federal Police’s “Operation Buzz Bomb” dismantled a network in Gardênia Azul that operated grenade-launching drones (Policia Federal do Brasil, 2024). It was discovered that a corporal of the Brazilian Navy was directly involved in the piloting and military adaptation of these devices for the criminal factions (G1 Rio, 2024).

In contrast to the open belligerence in Rio, the PCC in São Paulo employs drones under a corporate and mafia logic oriented toward high-precision tactical intelligence (Pyatakov, 2025). At the end of 2025, investigations by the Public Prosecutor’s Office revealed the plans of the Sintonia Restrita, a PCC cell dedicated to perpetrating attacks against state authorities (Record News, 2025). The criminals used drones to monitor meticulously the residences and routines of Lincoln Gakiya, a historic prosecutor in the fight against the PCC, and of Roberto Medina, coordinator of the penitentiary system (G1 São Paulo, 2025); for this purpose members of the faction rented adjacent properties in order to operate the drones with a direct line of sight, evaluating the height of the walls, the location of cameras, and the security vulnerabilities of the officials’ families, with the objective of planning selective assassinations (G1 São Paulo, 2025).

This technology of armed UAVs has surpassed the barriers of the large urban centers. In Itaberaí, State of Goiás, a criminal group operated a drone with explosives to extort and attempt against the life of a local businessman (Ôguen, 2026); however, the attack failed owing to a piloting error that caused the device to collide with a tree, yet it demonstrated that the technical barrier to executing acts of aerial terror is currently minimal and accessible to these groups (InfoMoney, 2024).

To counteract this asymmetry, the security forces are adopting counter-unmanned aerial vehicle systems. Current countermeasures operate mainly in detection and tracking through the use of passive radio-frequency (RF) systems and 3D digital-beam radars powered by artificial intelligence to discriminate autonomous drones (Ôguen, 2026). They likewise operate in neutralization, for which the government of the State of Rio de Janeiro has begun the acquisition of portable anti-drone rifles that interfere with the GPS signal at distances of up to 2 kilometers (Portal Nacional de Contratações Públicas, 2024). Nevertheless, adaptive criminality generates immediate countermeasures, so that in the face of the use of jammers the criminal incorporation of fiber-optic-guided drones occurs (Jovem Pan News, 2024). These devices, connected by micro-cables of up to 50 km in length, emit no radio signals and are completely immune to electronic interference (Jovem Pan News, 2024).

In definitive terms, the adoption of armed and surveillance drones by Brazilian criminal organizations is not a simple technological anomaly, but a systemic evolution in criminal governance and asymmetric conflict. Groups such as the CV, the TCP, and the PCC have demonstrated the capacity to apply “adaptive criminality”, transforming commercial devices into weapons of psychological terror and directed lethality. Confronting this threat requires a multidimensional response that integrates advanced countermeasures, forceful legal reforms, and policies oriented toward eradicating the transfer of military doctrine toward drug-trafficking networks.

2.7 Observed Convergences and Particularities in the Three Countries

The employment of drones by non-state criminal actors, with economic and/or political motivations, presents similarities across the three countries, yet also nuances and differences, owing to their own contexts and to the objectives pursued by the groupings that resort to this tactic, as well as to the spatial realities in which they operate.

In the case of Colombia, unlike the other two countries, it occurs within the framework of an internal armed conflict, in which these devices were incorporated as an extension of the armed capacities of the groupings involved, as a means of compensating for the asymmetry with respect to state capacities, in addition to the need to operate in zones of difficult access. At the tactical level, the incorporation of fiber-optic technology has been observed in order to evade inhibition systems, as well as the dissemination of chemical agents from drones, a situation that generates a high psychological impact. It must be specified that in this country the actors pursue objectives that combine political

and economic motivations, with pre-eminence of the latter, whereas in the other two countries the motivations are exclusively economic.

In Mexico, the preponderant feature of this phenomenon is that its purpose is the control of criminal markets, with its territorial implications regarding strategic zones for developing illicit businesses; therefore, drone attacks are a form of intimidating security forces and rival groups, through their psychological impact, in order to operate without difficulties: that is, this method is oriented toward the control of criminal markets. A distinctive element is the CJNG's "drone-operator units", with tactical attire and an implicit "professionalization".

On the other hand, in Brazil the principal particularity is that, unlike the preceding cases, it is exercised in densely populated urban environments, in the favelas, which are places of confined constructions and large numbers of inhabitants, dedicating its use to countering police action and thereby increasing the possibility of producing collateral damage owing to population concentration. Likewise, the use of drones for the surveillance of authorities has been evidenced, within the framework of assassination plans.

Table 1: Comparison of Drone Use in the Three Countries

Variable	Colombia	Mexico	Brasil
Actors	FARC dissidents and the ELN	Jalisco New Generation, Sinaloa, and Familia Michoacana cartels	Comando Vermelho and Primeiro Comando da Capital
Operational environment	Jungle and rural areas	Rural and semi-urban	Urban, densely populated
Objective of use	Confrontation with the armed forces, seeking to wear them down; territorial control for drug cultivation and other illicit activities	Territorial control, intimidation of rival cartels and security forces	Offensive against police operations in favelas, attacks on rival groups
Differentiating characteristic	Fiber optics to evade jammers, use of agricultural drones, dissemination of chemical agents	High-precision explosive-release mechanism, "swarm" attacks, artisanal drone construction, professionalization of "drone operators"	Attacks in urban areas, aerial surveillance, and plans for selective assassinations

Source: Authors' own elaboration.

This phenomenon shows that strategic convergence occurs in which this technology consolidates itself as a tool for the protection and strengthening of illicit economies through territorial control. In the three contexts, the use of these devices seeks to compensate for tactical asymmetry vis-à-vis the security forces, functioning as a force multiplier that enables guerrillas, cartels, and criminal groups to wear down the security forces and to subjugate, or at least intimidate, rival groups.

This adoption of readily accessible technology responds not only to an operational necessity but also, as has already been explained, pursues a psychological and coercive impact, employing aerial surveillance and attack to intimidate both the authorities and the civilian population and thereby “operate with relative impunity”. The most critical similarity lies in the capacity of these groups to evade countermeasures, succeeding in saturating or circumventing state responses through technical innovation and the exploitation of complex geographical environments, such as the jungle or the favelas, which poses a public-security challenge.

On the basis of the foregoing, specific challenges are shown for each country with regard to the neutralization of drones by law enforcement and security forces: for example, the theatre of operations of the Brazilian favelas, where high urban density hinders the deployment of countermeasures by the police; while in Colombia the use of fiber-optic technology represents a limitation for countermeasures such as jammers, in addition to the context in which it occurs, which, being an armed conflict, increases the temporality and intensity of its use; whereas in Mexico the complexity of confronting this threat is the tactical escalation determined by “swarm attacks” and high-precision explosive-release devices that limit or saturate police response capacity.

3. Conclusion

The reality of security in Latin America shows that the proliferation of unmanned aerial systems (UAS) has ceased to be a tactical innovation and has become the axis of a hybrid threat that redefines territorial control. This method has passed from being an emerging threat to becoming a present threat.

This phenomenon represents the materialization of the crime–terror continuum, in which criminal organizations in Mexico, Colombia, and Brazil adopt tactics of “asymmetric warfare” in order to dispute the monopoly of force. The integration of emerging technological capacities, illicit economies, and symbolic frameworks that legitimize violence consolidates the fact that these criminal actors reinforce hybrid forms of coercion and reinforces the relevance of Makarenko’s model for analyzing the contemporary transformation of non-state violence in Latin America. In this sense, the use of drones to execute attacks, conduct surveillance, and transport narcotics has eroded the traditional aerial superiority of states, compelling them to undertake a profound re-engineering of national-defense doctrines.

In Colombia, the shooting down of the helicopter in Amalfi on 21 August 2025, which resulted in the death of 13 police officers and was claimed by the ELN, marked a milestone in the capacity of the armed groups to deny airspace to the state. This sophistication is also manifested in the use of fiber-optic-guided drones, which are immune to conventional electronic-interference systems.

Despite institutional efforts to develop technological sovereignty and to install anti-drone systems, the absence of an integral strategy has generated ineffective containment. The state's response requires a profound re-engineering that prioritizes tactical mobility, preventive intelligence, and the capacity for technological adaptation in real time.

In Mexico, cartels such as the CJNG and La Familia Michoacana have militarized their actions through units of "drone operators" that employ improvised explosives to besiege communities and attack federal forces. Likewise, the use of drones for the dissemination of chemical agents in Michoacán and Guerrero implies a dimension of terrorism that occasions forced displacement and psychological impact upon the civilian population.

In Brazil, "Operation Contenção" of 2025 showed how the Comando Vermelho employs explosive-laden drones to harass elite units in dense urban environments. Meanwhile, in São Paulo the PCC uses this technology for precision surveillance of high judicial officials, demonstrating that the drone is a versatile tool both for direct offensive action and for advanced criminal intelligence.

In Colombia the armed forces are incorporating anti-drone systems and a bill to regulate their possession and use is also under consideration; nevertheless, it would be complex to guarantee the security of all personnel deployed on the ground. Together with the acquisition of technology and legal modifications, it is fundamental to establish civil-protection plans and to strengthen coordination among the state institutions with competence in the matter.

Toward 2030 the development of this threat is headed toward the deployment of autonomous swarms coordinated by artificial intelligence and the use of fiber-optic technologies to evade electronic warfare. The transition toward autonomous attacks and the possible dispersion of biological agents in urban centers represent risks for regional stability.

Regarding the foregoing, institutional success will not depend on isolated technological acquisitions, but on integral aerial governance that includes hemispheric legal harmonization and transnational cooperation.

It must be specified that, were this an exclusively political-violence phenomenon, the state response would fundamentally require attacking the narrative that sustains the struggle of the armed actors in order to diminish their social base of support, delegitimize their message, and generate demobilization. However, given that the motivations of these armed groups are not political or ideological, the strategy must not focus on the political dimension of the phenomenon, but mainly on addressing illicit activities such as drug trafficking and illegal mining, which constitute the sources of financing and motivation of these groupings – a situation that requires a police–military response, including the intelligence function, in addition to legal reforms and the intensification of state presence in specific territories.

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