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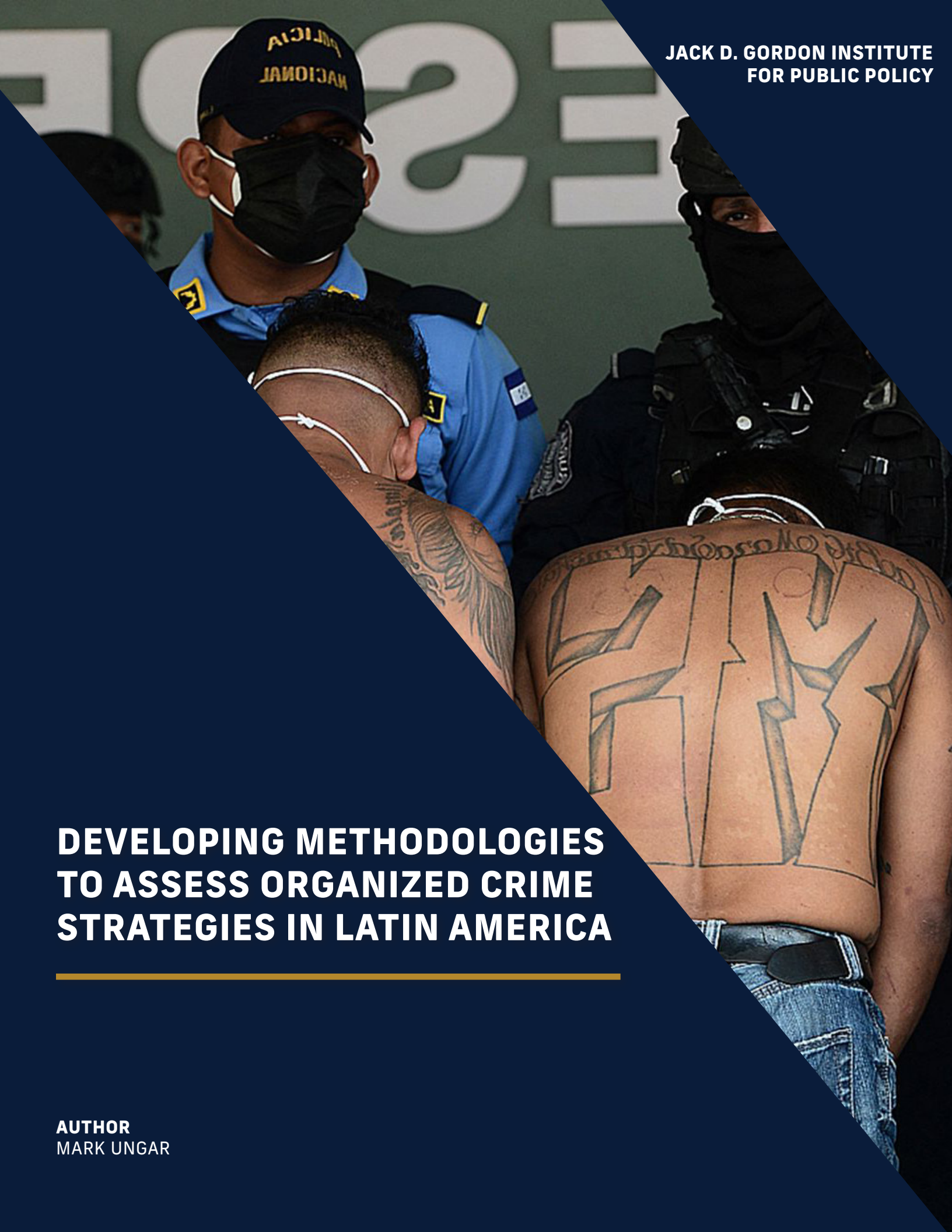

DEVELOPING METHODOLOGIES TO ASSESS ORGANIZED CRIME STRATEGIES IN LATIN AMERICA

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The Jack D. Gordon Institute for Public Policy, part of FIU's Steven J. Green School for International & Public Affairs was founded in 1985 to establish, promote, and advance the study of public policy and national security studies. The Gordon Institute serves as the forefront of public policy discourse by leading, integrating, and delivering exceptional multidisciplinary education and research while improving the competitiveness and diversity of students and professionals entering the workforce. The Gordon Institute is centered on four pillars: Academics, Professional Education, Research, and Community Outreach, each serving the mission of shaping public policy and national security solutions in the 21st century.

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Because of the increasingly organized and lethal nature of criminality in Latin America and Caribbean (LAC), OC policy may be the single most important safeguard for regional security. Nearly every current report, in fact, stresses OC's increasingly threatening impact "on the economic and sociopolitical environment of the region" as it fuels manifestations of criminal violence such as "trafficking of persons, exploitation of natural resources, threats to protected areas, forced displacement, criminal governance, robbery, physical aggression, extortion and kidnapping," according to UNDP.

A recognition of the tandem growth of OC's forms, though, does not mean a policy-relevant understanding of them. Such an understanding requires disentangling these crimes' many overlapping sources, removing embedded layers of methodological obstruction, and attuning responses with OC practice. This multiple challenge, though, first requires stepping back to re-evaluate existing paradigms in at least three ways that this report discusses. First is to question existing OC data, since much of it is suspect, biased, or incomplete – reflecting the misalignment of institutional process and policy goals. Second is the ways in which OC draws its power from a multitude of local, national and regional links among non-state, economic, and state agencies that, like dark matter, are omnipresent but largely invisible. Third is a need to widen and re-examine physical and geographic space.

Using embedded mixed methods to incorporate the ways in which available quantitative data and policies reflect the qualitative conditions of the agencies and processes that produce it, this report works to identify these broken, frayed or invisible inter-connections through a methodological framework as broadly flexible as the criminality it aims to measure and stop.

ISSUE FRAMES

State and Organized Crime Networking

Though essential to organized crime (OC), state involvement has not been sufficiently categorized. In the Latin American and Caribbean region (LAC), such involvement ranges from direct cartel formation, as in Venezuela; uneasy tolerance and regional collaboration, as with dissidents of the *Fuerzas Armadas Revolucionarias de Colombia* (FARC) in Colombia; formation of paramilitaries and "voluntary" police, as in Nicaragua; business-centered operations, like those in Peru and Brazil; and fluid police-OC alliances, as in Honduras, Guatemala, and Mexico. These links are expanding throughout the region as governments become increasingly unaccountable amid democratic deterioration and COVID-19-fueled socioeconomic disruption. Such involvement spreads along very disparate dimensions: geographic region, levels of government, and types of arrangements, among others. These differences have slowed the development of standard methodologies to make the connections that are key to effective policy. This report posits a broad way to begin reexamining overlapping state and non-state entities to better separate, reconnect, and more accurately assess the trajectory, extent, and power of these networks.

1. The State's Security Sector: Organized Crime policy often gets mired in chronic but avoidable institutional insecurity. Any OC strategy needs time, but little is afforded by the security sector's high rate of personal rotation after and between elections. The average mandate of an LAC police commissioner is two years; some countries have a new security minister almost every year. Such uncertainty is fueled and compounded by chronic institutional change. On one level is the disruption from top-level restructuring—whose logic on paper quickly dissolves into competition in practice, derailing even well-funded and ambitious anti-OC plans, such as Mexican President Felipe Calderón's new *Secretaría de Seguridad Pública*.[1] In Guatemala, prisons are the source of approximately 80 percent of extortion calls, and the lion's share from just one—Cantel in Quetzaltenango.[2] But the governor's request for cellphone blockers and body-scan

equipment in the prison was denied, and the anti-extortion interagency board he established was halted when he was replaced in May 2020.[3] Proliferation is another, less analyzed level. When a crime policy invariably does not produce announced results, there is a tendency to form new agencies without sufficient study of the ineffectiveness of those they replaced or their relations with other agencies. Problems of corruption and inefficiency that prompted the change will thus likely be repeated—as seen with new police units in Central America, the Andes, Mexico's new National Guard, and even with U.S.-vetted units. Some countries have up to 15 agencies focusing on a specific problem like gangs, making coordination among them nearly impossible. Such division is aggravated by a lack of trust by the federal police in local police units. Such proliferation also skews policy away from broader and more effective approaches. Since drugs are not just an issue of trafficking, but also of addiction and distribution, the most effective and holistic approach thus involves a range of agencies, which becomes more difficult when the institutional balance shifts decidedly toward policing.

Most police reforms are adapted to a traditional paradigm of transition when the start of a democratic regime or government allows for an opportunity to assess policy and re-engineer structures. Yet, such opportunities are ending due to a democratic deterioration in which elected autocracies allow autonomous practices to spread beneath the radar of national policy, such as altering police laws and hierarchies to create special units, facilitate mission creep, encourage economic autonomy, and ally with informal armed groups. For example, Nicaragua's police law (Law 872) permits units to form their own "businesses," which is a way of co-opting them into the Sandinista dictatorship. In Honduras, special units like the Tigres became highly corrupt, and others, like the Policía Militar del Orden Público, became increasingly powerful as they expanded from street patrols to investigation and repression. These trends are global. Egypt's Hosni Mubarak regime, for example, granted police stations autonomy to pursue their own aims, which varied from proselytizing to protection rackets. They also encouraged local police alliances with the *baltagiya* gangs controlling much of Cairo[4]—an arrangement also seen with Nigeria's Bakassi Boys or Indonesia's "ninjas."[5] In Venezuela, the *Circulos Boliviarianos*, formed in 2001 to impose social-political control in the *barrios*, has spread into other local security structures, such as the *Comités Ciudadanos de Control Policial*.[6]

2. OC structures: More debilitating than the amply documented incapacities of state structures is that they mirror, and are aggravated by, the opposing characteristics of OC entities: a constantly flexible workforce,[7] linked chains of autonomous geographic and specialized nodes,[8] and transnational coercive capacity. Policymakers have moved past traditional views of OC as competition among hierarchical and discreet entities but have not yet fully reconceptualized new frameworks centered on relationships, identities, and schemes. After all, what is the difference between an association of criminals and a criminal association, between a mob-run firm and a firm that collects and pays bribes, or between a police station and a local militia? Throughout LAC, OC hierarchies are giving way to churning alliances that maximize efficiency and minimize legal exposure by incorporating a range of legal and illegal entities; sharing physical, electronic, and financial resources; and burrowing into the gaps among state agencies. In between gangs at the neighborhood level and cartels at the transnational is an expanding typology of the number and types of entities with partial and greatly under-analyzed OC involvement. These include rural militias, business guards, social workers (e.g., Caracas), social-cleansing groups, communal self-defense committees (e.g., Mexico's Tierra Caliente),[9] and, above all, private security companies that dwarf the public sector. Latin America has about 2.5 million police officers and at least 3.8 million private guards (though certainly far more, since the majority are unregistered). Collaboration among these entities is constantly improving through the diverse array of products they produce, transport, and sell, including narcotics, pharmaceuticals, firearms, property (ranches, auto shops), money (gambling, currency exchange), humans (trafficking, prostitution), and natural resources (timber, mining, palm oil, wildlife). Such market diversity is facilitated by resource sharing: physical (e.g., truck fleets, airstrips), electronic (e.g., malware; prison cellphone smuggling), and financial (e.g. real estate investments). The lucrative alliances

that emerge are equally diverse: religious settlers and drug traffickers in Peru; mining groups and political parties in Bolivia; coyotes, narcotraffickers, and *maras* in Central America; cattle rustlers and coca processors in Colombia, and gold miners and energy companies in Venezuela. In Petén, Guatemala, where narco-planes land every ten days[10] and residents fight off military efforts to intervene, agricultural ministry staff work with OC groups to cut down rare trees that are shipped to the United States in trucks that return with firearms.[11]

Such alliances sink deep into society. One of OC's most pervasive but least measurable characteristics is social embeddedness: its integration into society through a range of services and pressures, such as protection, extortion, and co-optation. One of the most understudied is labor contracting. Many of the patterns this report discusses have involved OC-based diversification of labor markets characterized by temporary contracts and divisions of labor. In fact, even the majority of those working for the Russian, Albanian, and other "ethnic" mafias in New York are not members of that ethnicity. In Colombia, many FARC combatants from the former Agua Bonita demobilization center (*Espacio Territorial de Capacitación y Reincorporación* or ETCR) have informal economic contracts with a range of the area's illegal operators.[12] And a fuel of LAC private security firms' growth is their offer of multiple services through a workforce of contractors in dispersed locations. The state's criminal investigation, analysis, and prosecution largely lack replicable methodologies to identify these trends and to assess how that incapacity reverberates through each stage of the enforcement chain or how their databases do not measure what they purport to. Even for highly controlled items or substances (like mercury, discussed below), state weakness facilitates collaboration among producers, importers, transporters, and consumers that a social network analysis can map out to show how, where, and when it unfolds. Operational policies can then steadily incorporate these forms of local collaboration. In its oversight of the Cooperative Security Location in Comalapa, for example, U.S. Southern Command (SOUTHCOM) could integrate such local OC networks into its operations to detect aircraft or vessels engaged in illicit drug trafficking.

The Enforcement Chain and Criminal Justice

1. Investigation and Prosecution: The ineffectiveness of LAC's judicial process, in which less than 10 percent of homicides lead to trial, is well known. So too are its causes, from anemic budgeting to insecure personnel. For OC investigations, though, a particularly deep deficiency is that intelligence itself is not assessed frequently or critically. Because of reliance on sources that take time to develop, strengthening of intelligence often means expanding rather than questioning those sources. A result is stalled or stale data that limits intelligence in several ways. On a micro level, a great deal of information comes from informants within targeted geographic or sectoral communities. But such sources quickly shift or narrow. In South America, community policing programs were a rich source of detail for local intelligence but became biased as dominant, often OC-connected cliques co-opted them. On a macro level, one of the few commonalities among LAC's otherwise wide variety of regimes is a politically-driven assault on intelligence mechanisms. Along with the dismantling of anti-corruption bodies in Central America and laws restricting non-governmental organizations (NGOs) in Guatemala, Nicaragua, and El Salvador,[13] Supreme Courts are becoming more politically pliable, which will invariably harm their documentation units; *fiscalías'* shrinking resources and autonomy are limiting their intelligence gathering, and regimes are stepping up defenestration of top officials and subsuming independent-minded agencies (such as Peru's forestry office) when they uncover corruption. These trends have been a subject of criticism and concern, but their larger combined damage on intelligence is not yet fully recognized or absorbed.

Such blind spots prevent awareness of the symbiotic mismatch between state and criminal networks, as described above. In Colombia's Guaviare province, for example, massive coca planting and cocaine processing are centered on aggressive deforestation that fosters other types of OC, particularly mining. Interagency coordination is improving; police and military work with *fiscales* and use real-time satellite and drone monitoring. But such collaboration comes under increased strain the further it falls behind OC. For example, security officials complain of poor state support in areas where they operate

and the large size of protected areas where they cannot. For example, they cite inconsistent naval engagement, even though each month, about four tons of coca—along with illegal gold—are transported on the Inírida River that borders the Nunuk indigenous area where state presence is restricted. Such institutional gaps widen as OC operations grow more effective by expanding its participants, which currently include the Puntiyeros,[14] Gulf Clan, local gangs, and the FARC's First and Seventh Fronts. As with other security reforms, blame invariably turns to the judiciary. Security officials claim that all the laws are too lenient and default on the release of detainees and, therefore, must be overhauled to enable more detention with less evidence.[15] Similar gaps exist on other issues. For instance, police and military officials in Guatemala say their presence in high-crime zones gradually encourages citizens to bring them intelligence on drug distribution, extortion, carjacking, and OC recruitment. But poor coordination with municipal officials and changing directives from above prevent this presence from being consistent enough to build long-term citizen trust—which is key to fully understanding local conditions and crimes.

In addition to the lack of personnel and resources to discern these changes, OC prosecutors are hobbled by additional issues, such as database sharing, competition among other special offices, and limited territorial presence. There is a lack of support for every stage of an investigation, from the protection of crime scenes to laboratories and record-keeping. Guatemala's *Fiscalía* lacks branches in more than 40 percent of the country, while low salaries and the danger of the job elevates the likelihood of *fiscales* being bribed or killed. Its anti-money laundering office, critical to the battle with OC, not only lacks its own analysts, but its prosecutors have to travel by car, spending days on the road while the money they chase whizzes through the banking system.[16] A study of the 391 murders in the Honduran city of Comayagua between 2010 and 2012 found that only 13 percent led to an investigation because only 34 cases were investigated. Even successes are deceptive. Most trials of major political or crime figures, in Nicaragua and Guatemala, for example, may result in convictions but rarely into a deeper investigation of their OC operations. In Brazil, Environment Minister Ricardo Salles quit in June 2021 under a cloud of a criminal investigation into involvement with illegal wood exports, which is likely to suspend the investigation into the broader OC environmental networks with which he was connected.[17] Through the region, mounting politicization of the police and courts will make such investigations even less likely to begin or conclude.

2. Trial and Sanction: Most OC cases are mired in the criminal justice system, greatly limiting the larger policy lessons that can emerge from them. Aside from the political and financial limits on courts are less apparent but equally impactful restrictions caused by regulations, jurisprudence, the law, and procedural stalemates. In particular, insufficient regulatory backing for laws critical to OC policy does not just lead to exceptions or delays but can nullify the law itself. Guatemala's *Ley de Equipos Terminales Móviles* (Decree 8-2013) prohibits the use of cellphones within the penitentiary system—a vital tool against OC operations. In addition, some of the prisons are dominated by MS-13 and the 18th Street gang. But the institutional and regulatory obstacles to implement that prohibition—such as non-existent guard training and telephone company obstruction—have made it dead on arrival. In El Salvador, a Supreme Court ruling blocked the police from investigating private firms for misplaced arms, enabling them to hide trafficking channels. According to Mexico's National Private Security Council, more than 80 percent of private firms operate outside local, state, and federal regulations. In other cases, judges are buried in regulations. For instance, Peru has over 30,000 environmental laws extending across 12 legal categories (agriculture, water, mining, etc.). These huge regulatory gaps, such as on peatlands and construction, have been a boon for OC. All these legal imbalances—combined with the dearth of laboratories, prosecutors, courts, and judges themselves—result in a limited process whose OC suspects are mostly from its lower ranks. Security officials' frustration at this judicial impotence further aggravates tensions between them and their judicial colleagues.

Regional Dynamics: Political and Geo-Spatial Analysis

Given the many forms of LAC integration—from contraband to politics—OC policy needs to better track and adapt to changing national conditions. Three areas provide possible starting points.

1. Border Zones: First is recognition of the particular OC ecosystems of border zones. In Central America, the Caribbean coast of Honduras and Nicaragua, through which the vast majority of cocaine exports transit, is populated by indigenous peoples with politically fractured federations. In Honduras, they have varying levels of alliances and accommodations with traffickers, and in Nicaragua, they face the additional complication of repression by an autocratic regime. Along the northern tier of the Colombia-Venezuela border, OC groups' takeover has brought security and thus increasing support for them by the Wayuu peoples. Further south on the border, alliances between FARC dissidents in Colombia and state-sponsored cartels in Venezuela have enabled unencumbered OC operations. Guatemalan Governance Ministry officials say that any possibility of controlling OC in the Mexico border departments must center on documenting local-level collaboration, such as how the Zetas and immigration officials join the *maras* to extort migrants and develop links with narco- and human traffickers.[18] One of OC's more concentrated border zones is the coastal frontier of Guatemala and Honduras, where trafficking of humans, narcotics, and arms is fueled by the interaction of legal and illegal money and business, state, and OC actors. These conditions push local society into the hands of OC: flooded fishing communities in Cuyamel were expelled by police from nearby highlands when they tried to resettle, elderly activists in Omoa received death threats when they complained about the state's power plant, and municipal officials ignored reports of extortion by truckers from Puerto Cortés.[19] Such relationships are too specific to each location to be implemented into regional policy, of course, but focusing on their common traits—such as distrust and displacement—can be. In July 2021, U.S. personnel from Joint Task Force-Bravo, the U.S. Agency for International Development, the Honduran Armed Forces, and other units conducted a joint training to enhance disaster response readiness. These efforts can be strengthened by providing climate change adaption, assessing the provision of social services, and establishing anonymous channels for citizen complaints.

2. Political and Policy Reverberations: Another foundation for a durable policy-focused methodology is to track the regional effects of specific policy changes. For example, a study of the 2004 lapse of the U.S. Ban on Assault Weapons (H.R. 4296) showed an increase in homicides in Mexican cities near the border states (excluding California, which retained most of the ban).[20] Such an approach can be replicated by following developments in states like Florida, production by specific companies, or regulatory changes such as the transfer of arms export licensing authority from the State to the Commerce Department during the Trump administration. Tracking a particular cache of weapons—many of which end up in OC hands, as discussed below—can also be quantitatively well-grounded while exposing corruption along the supply chain. For example, Honduras imported 3,064 machine guns from Colt between 2015 and 2017, but did not analyze where they ended up. Another form of regional influence is judicial. A recent example is a lawsuit filed in August 2021 by the Mexican government in federal court against a dozen U.S. gun manufacturers whose weapons have been used in Mexico.[21] Many of the points of the complaint, such as negligent marketing, follow the path set by the lawsuit against Remington by the families of the 2012 Sandy Hook killings.

A more amorphous but ultimately more damaging regional trend is political. The well-known "wave" view of contemporary democratization in different regions is gradually being applied to the current wave of authoritarianism, but primarily within the realm of electoral politics. Far more needed is a microanalysis of how key agencies are captured, politicized, and repurposed.[22] For example, agencies responsible for upholding the rule of law or promoting human rights—such as the Fiscalía, Procuraduría, rights commissions, and *Defensoria del Pueblo*—are often not just neutralized but used for ends contrary to their mandates, such as denigrating or downgrading certain rights, forcing state employees to overtly support the regime, or spreading disinformation. One current study in Honduras reveals that two-

thirds of the electorate subscribe to websites—many affiliated with political actors—that post false information, and employees of the state's *Empresa Nacional de Energía Eléctrica* are routinely pressed into overt shows of pro-government support. In 2012, Nicaragua established a *Unidad de Análisis Financiero* to investigate money laundering because of pressure from the Financial Action Task Force (FATF). Yet this organization has used it to launder foreign aid and track political opponents. Such practices, many of which can be traced back to Venezuela after 2000, have spread to every LAC regime type and governance area.

3. Supply Lines: Drawing on the regulatory gaps and network flexibility discussed above, OC has reconfigured supply lines, from short (e.g., selling drugs on street corners) to long (e.g., overseas shipping). Such patterns are emerging around the world, such as heroin smuggling along old contraband routes through the Sahara and Baluchistan. In the Caribbean basin, unclear regulations and sparse enforcement coverage have solidified sea routes, as seen through such developments as cocaine shipments docked in ports on Panama's north coast and an increase in Illegal, Unregulated, and Unreported (IUU) fishing, which prompted SOUTHCOM to participate in the Operation Southern Cross deployment and the 2021 Tradewinds Operation. Local supply lines are logistically separate but operationally connected, blurring long-held distinctions of crimes by scale and complexity. In many areas, predatory crimes (e.g., carjacking and express kidnappings, which do not require extensive planning) and symbiotic crimes (providing legal goods and services in illegal ways, such as waste disposal) support and merge with transnational crimes like narcotrafficking. Extortion, for instance, has become one of the most common, reliable, and often lucrative income sources because it funnels money from thousands of individual schemes into more extensive cross-border OC operations. For quantitative analysis, such patterns pose a challenge as variables morph from interval to nominal; for example, extracted gold goes not just to gold markets but is dispersed into the range of OC groups and laundering options.

CASE STUDIES

To show how these three issue frameworks can help form and implement OC policy, this section examines two of the most intractable OC challenges—arms trafficking and environmental crime—because they most clearly and strongly embody network flexibility, detachment from the enforcement chain, and cross-national momentum. To combine and apply those traits, both case studies include a causal model based on the enforcement chain that allows for a more focused examination of each stage with a mixed-methods approach composed of a quantitative analysis of data and a qualitative analysis of the state entities that produce and shape it. In particular, it works to separate reliable from unreliable data and then identify the links among the reliable data that are most helpful to OC enforcement and its ultimate policy goals. In enforcement against OC operations ranging from extortion to narcotrafficking, for instance, policymakers begin with the relationships they can measure and whose significance is steadily clear. Those core connections, finally, are connected in this section with their ultimate policy goal. In short, by focusing on the most important links with the most reliable data, this approach can identify OC policy's most embedded vulnerabilities and its contribution to the long-term policy objective.

Firearms

Firearms are responsible for more than 85 percent of LAC murders, double the global average of 42 percent. Most of the region is awash in weaponry; Central America has more than three million firearms. For OC groups, arms are the most reliable bridge between legal and illegal markets: They are an instrument of physical control, a stable currency, a reliable money-laundering channel, and a solid basis for alliances with state actors. A wide range of arms, from pistols to M72 rocket launchers, end up each year with groups like MS-13, the Sinaloa Cartel, and the Knights Templar.[23]

What are the weak links in the chain of enforcement to control arms trafficking, and how do state-OC networks and regional dynamics shape them? Despite laws and institutions, governments lack methodologies to assess this process objectively and thoroughly.

TABLE 1: THE CHAIN OF ENFORCEMENT

Investigation	Prosecution	Trial/Sanction	Policy Aims
1. Borders and Imports	1. Seizure of arms	1. Carry and possession charges	1. Arms in Circulation
2. Private Exchange	2. Ballistics testing	2. Trafficking charges	2. Homicides with arms
3. Registration			

Source: Created by the author

In the enforcement chain, the first key step of investigation is the flow of arms into the country, which occurs through more channels than the state can regulate or monitor. Despite recent improvements, customs agencies have not carried out systemic evaluations of straw purchasing; the so-called "ant" trade;[24] the shipment of arms parts inside legal imports like cars, microwaves (or in the recent raid in Delaware, paint cans); non-competitive contracts for importers; permit fraud; and the excessive numbers of exemptions to import rules. The role of private security is also hidden. More than 40 percent of illegal arms in El Salvador are connected to private firms, most of which do not report sales or cooperate with criminal investigations. Between 2006 and 2015, the country's biggest companies imported 27,910 arms.[25] Since many of their owners are linked to top political figures, growing authoritarianism will likely strengthen those bonds. In the larger context, as discussed above, is an inadequate analysis of regional supply lines. For example, in the United States, the "Iron Pipeline" on I-95 is a constant source of arms in cities with strict controls, such as New York City, where 90 percent of those recovered at crime scenes come from out-of-state.[26] Even with international borders, trafficking from South America through Mexico is no less restricted. Military officials estimate there are more than 100 blind spots on Guatemala's border and 50 on El Salvador's;[27] in Honduras, OC entities have bought land straddling its Caribbean border.

The second area of investigation is through registration and licensing: by assessing the kinds of arms that are recorded, officials can more accurately estimate what arms are illegally circulating and make connections with trafficking. But categorization of registered arms is so inconsistent that basic categories such as "arms of war" are ill-defined and not distinguished from others like "rifles." More than 70 percent of arms licenses in the El Salvador Firearms Registry have expired, while Guatemala's *Dirección General de Control de Armas y Municiones* lacks the capacity to monitor or suspend licenses, such as those of the 33 people possessing over 50 weapons. Coordination is poor: police, prosecutorial, and court officials in all three Northern Triangle countries say their respective agencies "do not talk to each other." Moreover, no Central American government has a clear accounting of police and military arsenals; this is rooted in a persistent lack of trust and cooperation between the armed forces and prosecutors. In El Salvador, where the *Fiscalía*'s Arms Trafficking Unit had only four officers as of 2018, army officers have obstructed prosecutors investigating top officials, including a former defense minister, for arms trafficking.[28]

Prosecution on arms, of course, requires an actual seizure of weapons—in criminal investigations or other operations—which is followed in most countries by testing by the Integrated *Ballistic* Identification System (IBIS), through which digital imaging of shells elicit "hits" with specific weapons. Ballistics testing is more critical in Central America than in other regions due to each weapon's frequent use; a typical arm is used three times each month, compared to once every six months in the United States. But in 2017 Guatemala's *Instituto Nacional de Ciencias Forenses* had only 18 specialists, compared to 24 in 2011. They receive over 100 arms each month, with a backlog of more than 4,000 weapons.[29]

Causal Model: The most promising recent step to control Central America's arms trafficking and use was taken by Honduras with a comprehensive 2018 law whose many provisions include strict possession limits and a concerted registration drive.[30]

The law has promised support, including existing and planned institutional change along the enforcement chain. One of the most significant has been the consolidation of customs units under the *Aduanas de Honduras*, which operates three air terminals, eight ports, and 12 land passes. But even with document inspections and gamma and X-ray systems to examine 350,000 containers each year, its capacity falls well short of need. The import with the highest rate of inspection—up to 45 percent—is automobiles, but all smaller containers—in which arms, arms parts, and ammunition are

more likely to be hidden—are inspected far less frequently.[31] Many smaller ports of entry, such as La Ceiba and Trujillo, lack most of the big facilities' scanning equipment. And, of course, *Aduanas* does not extend to border blind spots. Although there has been no official study, the police know they exist near at least six customs facilities, all in zones where contraband can be quickly absorbed into local OC.

Another deficiency in the investigation stage is the burgeoning private security sector, whose growth far outpaces data about it. There is a substantial data discrepancy in the number of registered firms (the Security Ministry's Registry reports 1,497 registrations between 2000 and 2019, although the actual total registered only adds up to 903), which all officials acknowledge is a fraction of the total operating in the country. Together, these firms employ between 60,000 (according to the Association of Private Security Companies in Honduras) and 100,000 guards,[32] making them three to five times larger than the police. The estimated number of firearms in the sector is between 70,000 (according to the *Comisión Especial de Depuración y Transformación*) and 400,000 (Violence Observatory, *El Instituto Universitario en Democracia Paz y Seguridad* or IUDPAS), with 33,000 carrying permits. None of this data includes the country's estimated 700 irregular armed groups, which together may have up to 500,000 arms.[33] Private sales are regularly conducted at shows, pawnshops, and through social networks. Many of those arms are illegal "artisanal" weapons known as *chimbas*, produced in workshops and "repair" shops concentrated in the OC hotspots of Cortés, Atlántida, and Olancho departments.[34] Although the Military Police reports that these arms ranked sixth in frequency in the commission of crimes from 2014 to 2018,[35] the law does not have a plan to control them, and the police does not have (or choose to provide) statistics on them.

There is also a lack of accountability over the enormous quantity of arms purchased by the government. Between 2009 and 2018, it bought over US$105 million in arms,[36] reaching a record of US$35.5 million in 2017 and 2018. Although the defense minister said it is "impossible" for weapons to leave military custody without authorization,[37] the loss is so commonplace that police chiefs in the northern region say that arms trafficking is one of the strongest links between military officers and OC groups.[38] Such links were seen during a 2019 arrest of an MS-13 leader that seized heavy-caliber weapons and police vests and later exposed dozens of police officers at all ranks who were collaborating with MS-13 leaders.[39] Dozens of anti-tank weapons were once stolen from Salvadoran stocks and sold to a Mexican drug cartel based in San Pedro Sula.[40] Throughout the region, military stockpiles are regarded as the single biggest source of illegally circulating weaponry.[41]

For registration, another key step in an investigation, the new law is rooted in an ambitious structure composed of a Weapons Control Unit, the Control Section for Specialized Weapons Services Fire and Ammunition, and the Section for Control and Specialized Services of Explosives and Related Materials. To encourage registration, the National Arms Registry coordinates closely with the state-run *Armería*, the country's only legal arms seller. The Honduran Congress also plans to establish 44 ballistics laboratories and licensing centers around the country, financed by income generated by the law's implementation. Such plans are comprehensive and clear but, as with security reform around the region, lack detailed or realistic ways to fund, monitor, or evaluate them. In this case, there has been no published plan, schedule, or budget.[42]

The next stage in enforcement, testing seized weapons, rests on an IBIS severely limited in data and functionality. Less than 20 percent of the weapons that arrive at the unit in charge—the *Dirección General de Medicina Forense* (DGMF)—are registered at the National Arms Registry (though customs and other officials say it is far less), meaning no owner can be easily identified. DGMF received 18,083 weapons between 2013 and 2019; 8,255 of these weapons were linked to a crime between 2014 and 2018. But, most crucially, only 41 percent were entered into IBIS. An underlying cause for this uneven and limited process is institutional deficiency. The lab lacks basic biosecurity equipment, such as eye protection, had only five specialists (as of the end of 2019) who work in one daily eight-hour shift instead of the three that would be needed to keep up with testing

TABLE 2: ARMS CRIMES, HONDURAS, 2014-2019

Year	New Arms Registered	Number of Reported Arms Crimes	Seized Arms	Hits	Homicides per 100,000 persons	Number of Judicial Sentences of all arms-related crimes
2014	18,316		3,295			1,107 cases
2015	20,451	2,551	4,574	114	60.0	
2016	18,761	2,887	4,423	208	59.1	
2017	16,008	2,880	3,017	117	43.5	3,157 cases
2018	20,170	2,868	2,428	56	41.4	
2019		1,694	1,200 (est.)	46	43.6	658, a drop attributed to the 2018 law

demand.[43] They examine about 2,000 weapons annually, with a continual backlog of up to 5,000 to 10,000. According to officials, its equipment is "completely obsolete."[44] Worse, IBIS was closed in May 2019 because of a failure to pay the annual licensing fee.

These deficiencies continue into the prosecution and sanction stages. Between June 2013 and November 2017, fewer than 10 percent of cases with "hits" were prosecuted.[45] Although the Supreme Court's Documentation Center documents all legal cases, it does not differentiate among arms convictions, so there is no ability to analyze the number of carry, possession, trafficking, or other types of arms convictions, thus depriving OC policy of a potentially useful data set.

In addition, the new arms law lacks the kinds of interagency mandates or geographic focus discussed in this report as necessary to apply and evaluate data. For example, there is no protocol for prosecutors to report back to the DGMF on the role of hits in their investigations and no analysis of trafficking at the department level. Data uncertainty also impacts the two main policy aims—circulating arms and homicides with arms—very difficult to measure. Estimates of the arms in circulation are so vast they are methodologically useless (see Appendix 1). Even if this number were clearer, it is so large that any arms control law would have to make enormous progress to make a measurable dent. The number of homicides committed with arms is also unclear, ranging from 45 percent to 85 percent (see Appendix 1). But since the numbers reported by the state's statistical arms are an anomaly from the consensus, the homicide rate can be used as a proxy for homicides with arms in a causal model.

Amid the noise of poor data, what is the best way to find policy-relevant relationships over a statistically significant period? As discussed above, numbers in the first and final stages are unreliable. In between, reliable data shows that charges and sanctions have dropped, but the data is not complete enough to demonstrate a discernable time-lagged trend—or whether this drop reflects a reduction in arms crimes or investigative capacity. But one core relationship in the enforcement chain is between seized arms and the quantity of hits: the number of seizures should theoretically increase the number of hits, which is critical to understanding and solving OC arms operations.

Analysis of this chart leads to several initial conclusions. First, the number of reported arms crimes and seized arms is a vanishingly small percentage of circulating arms. Second, there is no relationship between those two numbers and quantity of hits, probably because of the backlogs and relatively small number of registered arms. Finally, a linear regression was used in an initial test of the impact on homicides, using the formula $Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + E$, in which Y = Homicides per 100,000 persons; X_1 = Arms Registered; X_2 = number of reported arms crimes; X_3 = Seized Arms; and X_4 = Quantity of Hits.[1] The resulting regression yielded a predicted value for homicides of 49.52, affirming a lack of statistical significance (Appendix 1). It also indicated that the model's homoscedasticity (homogeneity of variance) is high. A mixed-methods approach could identify the more determinative unincorporated variables through quantitative assessment of state actors, such as how political actors and actions—like elected officials' pro-gun rhetoric—discourage objective data collection. This model also demonstrates that the 2018 law needs to fully implement each provision with long-term support.

Environmental Crime

Environmental crimes—loosely defined as the illegal production and trade of forestry products like timber, minerals (e.g., gold, coltan), hydrocarbons, export crops (e.g., palm oil), and wildlife—is fast becoming a fulcrum of OC, earning approximately $258 billion in 2016, sharply up 26 percent from the previous year.[46] Even strong responses by consumer countries, such as the U.S. 2008 Lacey Act, are falling behind constantly morphing alliances that facilitate this form of OC, ranging from Central American narco-ranching to Miami's narcotrafficking "river of gold."[47] In Mexico, some of the most lethal OC groups—including the Zetas, Sinaloa Cartel, and Knights Templar—have taken over many mining operations, from extraction to export.[48]

Much of this OC centers on the Amazon Basin, which holds half of Earth's tropical forests and whose goods are highly lucrative because of the ease with which they are extracted, transported, and integrated into the licit economy. In contrast to this fluid market is the state's lack of coordination, consistency, and judicial clarity to investigate it. The OC use of timber exemplifies this contrast, beginning with the removal of trees, which is facilitated by widespread corruption (such as sales of permits by officials, or to speed up approval of environmental impact reports, which can take up to four years in Peru); document falsification (such as saying timber was extracted from a permitted area); intimidation of indigenous and farmer populations; outdated road mapping, and inadequate land titling—an estimated 70 percent of Amazon land is untitled. Once the timber is removed, most of it is processed in sawmills increasingly consolidated by OC. Like arms, timber is a bridge from the legal to illegal markets since planks' source wood is nearly impossible to trace. As of 2019, Peru had approximately 250 registered sawmills, but every regional official says there are many more. In the country's primary sawmill zone, the Manantay port of Pucallpa—at a confluence of Amazon tributaries with a road link to Lima—observations reveal dozens of unmarked facilities, with daily output clearly beyond the plank size and total volume permitted. Even the head of the sawmill federation admitted to extensive legal violations.[49] Criminality continues into the next stage of transit. Illegal Brazilian and Peruvian wood are laundered into Colombian exports, with traders declaring that a species matches the one on the official documents, while coca hidden in timber is smuggled to Brazil. Poor internet connections prevent verification at checkpoints, and disputes between local and federal officials—such as over contraband worth less than US$1,000, which prompts traffickers to ship cargo in smaller portions—are common. In Peru, where wood transport requires a Forest Transit Permit (GTF), one study found that on 48 percent of GTFs, stated points of extraction were unverified.[50] Observations of forestry checkpoints also indicate the lack of staff to supervise trucks fully; even those officials say corruption itself was the main motivation for creating more checkpoints. SOUTHCOM recently conducted Exercise Relampago VI in Colombia to improve military deployment strategies; a follow-up exercise could focus on deployment against OC in its Amazon region.

While institutional relations are gradually coalescing as these obstacles are identified, they remain characterized more by competition and confusion than coordination. Environmental ministries constantly clash with other ministries, and in Brazil, it has been absorbed into the agricultural ministry. State-wide regulatory confusion leads to streams of overlapping and often conflicting data relevant to investigations. For example, sustainable crop approvals depend on often unclear information on land titles, tree species, financial credit, physical security, and road quality. Many alternative crop approvals are fronts for cocaine, and many "artisanal" mining permits are Trojan horses for large operations. Such inadvertent approvals generate further criminality, such as when a logging concession spurs clandestine "fish bone" patterns of illegal secondary roads.[51] This combination of political competition and regulatory confusion has been compounded by decentralization as already fractious relationships among federal, regional, and municipal agencies are aggravated by widely varying policies and capacities on the environment. For example, exploratory concessions are often approved locally without an environmental impact study—in part because dominance by a smaller number of businesses in rural areas makes regional officials more beholden to them—resulting in a lack of key data, like impacts on adjacent areas.

Environmental police have been established throughout the region but remain limited. In Colombia, for example, violence confines police to the perimeters of small municipalities, while Forest Institute officials are often blocked by militia owners even when they have a judge's order. Despite the growth of environmental prosecutor units, which now operate in 13 countries, these officials struggle to attain evidence and witnesses. Remote locations and rapid physical degradation make physical evidence elusive, with a dearth of local labs to test collected material. Witnesses, the other main element in ascertaining abuse, are made scarce by record rates of assassination.[52] Together, these limits steer enforcement agencies toward physical raids, which rarely produce evidence acceptable to judges and end up scattering loggers and miners to new areas with a displacement that multiplies enforcement challenges.[53] Unreliable data on imports, production, land use, and other activities further limits sanctioning. Prosecutors are also reluctant to act when state negligence, unclear regulation, or faulty infrastructure are involved, such as oil pipelines, targets of OC sabotage in Mexico and Peru. Police and prosecutors throughout the Amazon also complain that judges too often release suspects because they are *campesinos,* have just small quantities, or do not come with evidence (which is nearly unattainable), such as entering a prohibited area. Chronically unable to meet criminal law standards, judges usually hand down administrative and civil law sanctions in environmental cases—fines, confiscations, permit suspensions, or restoration of damaged areas. These rulings undoubtedly curb deforestation, but the majority are unenforced or uncollected (in Brazil, under 1 percent of fines are paid), and there is no methodology to ascertain when and how they do. Since most fines are smaller than the actual violation's profits, the impact is widely presumed to be limited.

Given the range of products, countries, and production steps in environmental OC, how can they be distilled into a replicable methodology that informs policy? Such a model can center on the chain of enforcement, which begins with an investigation of abuses connected to five primary drivers of deforestation: ranching, mining, agriculture, logging, and road building. When monitoring generates alerts of unauthorized activity, they prompt investigations of titles, permits, and licenses to determine if violations occurred in these five areas. Investigatory findings of culpability then lead to sanctions by environmental agencies or through criminal prosecution. Parallel to the aim of reducing deadly firearm use, the result should be reduced deforestation, perhaps the best measure of the causes and spread of OC, since it opens up areas for coca cultivation and illegal mining.

To test that hypothesis, this section posits a causal model that correlates over a five-year timeframe the initial stage, alerts over violations involving deforestation's five main drivers, with the final stage of policy aims, which is deforestation rates. Laying out this enforcement chain will then help to ascertain causality: how many alerts lead to an investigation, how many investigations lead to sanctions, and how much do sanctions decrease deforestation?[54] Only by identifying those regulatory gaps will we see how OC weaponizes them.

Parallel to Honduras and its new law as a case study for arms, Colombia is a good case study for environmental OC. Its courts and primary environmental law, Law 1333 of 2009, is one of the world's strongest, with an extended statute

TABLE 3: THE CHAIN OF ENFORCEMENT

Investigation	Prosecution	Trial, Sanction	Results
1. Ranching 2. Mining/ Extraction 3. Agriculture 4. Timber 5. Road Building	*Permits and Licenses:* 1. Land: impact studies, indigenous area regulations, production limits, 2. Extraction Permits: logging, mining 3. Transformation: smelting, sawmills 4. Transit: roads, waterways, air routes	1. Fines 2. Penal Sentence 3. Restoration 4. Community Service	Rates of Deforestation

of limitations and burden of proof on alleged offenders—giving it the region's best arsenal against environmental OC. Its already powerful armed forces have been supplemented by environmental, rural, and anti-mining units (Unimic or *Unidad Nacional de Intervención Contra la Minería Criminal*). Regulations are also well developed. Any activity requires an *Estudio de Impacto Ambiental* (EIA); a *Licencia Ambiental*; and an *Informe de Cumplimiento Ambiental*. Most ranching and mining licenses are issued by the *Autoridad Nacional de Licencias Ambientales* (ANLA), and logging requires an approved Forestry Management Plan (PMF or *Plan de Manejo Forestal*). There are also three main transport permits.

But even with this support, the country struggles to stem rapid OC alliances of deforestation, mining, and cocaine. Deforestation increased 23 percent in the 2016-2018 period, while 80 percent of all mining is illegal, earning an estimated $2.4 billion a year.[55] The primary catalyst for most of this destruction is cocaine, whose production levels are higher than at any point during the civil war. The amount of land in Colombia used to harvest coca spread out to over 212,000 hectares in 2019, while cocaine production rose by 8 percent.[56] The socioeconomic embeddedness is apparent: Farmers say that with coca, "in five days there's money in your pocket,"[57] providing a steady income up to a thousand times more than from dairy or other crops. Poor regulation similarly fosters OC in the mining and hydrocarbon sectors. Since the peace accords opened access to the Amazon after 2016, mining is estimated to be the biggest cause of deforestation. Areas affected nationally by only alluvial gold mining grew from 79,000 hectares in 2014 to 84,000 hectares in 2016,[58] in part because an estimated two out of every three operations take place outside regulatory frameworks. Many other types of mining, such as rare earth minerals and coltan, are even less regulated. The ANLA gives permits for artisanal mining operations, but budgetary limits, staff turnover (ANLA had eight directors between 2011 to 2020),[59] and endemic corruption[60] severely limit its regulatory reach. Governance overlaps aggravate the problem; gold mining permits, for example, are routinely granted by municipalities. Organized Crime groups run supply lines of cyanide, and those reporting violations are attacked. Many of the ANH-granted 44 hydrocarbon exploratory blocks overlap with indigenous territories and protected areas.

Even though national law is strong, it is disconnected from the Amazon's reality. Colombian Resolution 261 of 2018, for example, establishes the "Agricultural Frontier" by separating economically active and protected areas, yet doesn't adequately address the overlap of more than four million hectares of protected areas, indigenous land, mining titles, water districts, and empty lots. A case in point is Caquetá. With the country's highest rate of forest loss, 80 percent of the economy is based on ranching, which is constantly expanding because of the region's poor soil. In addition, licenses are rarely denied, regulations are regularly skirted, and the growing collaboration of ranchers and narcotraffickers in protected areas is often overlooked.[61] Regulatory and political tensions also come together over local roads.[62] Alarmed at how they facilitate OC, the national government has tried to close these roads, but local officials and communities vehemently oppose this and argue that they are the only way to replace illegal with legal and sustainable activity.[63]

Many other gaps are geographic in a region whose vastness and topography allow OC to avoid detection altogether. Criminal groups known Bacrim (*Bandas Criminales*, many of which spun off from drug cartels) work with local businesses and pay people in reserves to log trees, while mining operations are increasingly run by FARC dissidents linked to the Sinaloa cartel. In contrast, most riverside posts have between 10 and 20 officers to patrol an average of 170 fluvial kilometers (km). Further inland, miners and loggers often have enough warning of military raids to move to new locations. In addition, a lack of satellite signals prevents real-time communication among enforcement agencies, and the Judicial Police lack needed training and vehicles like helicopters to get to the crime scenes.[64] Since all officers rotate every one to two years, they cannot develop expertise or intelligence, such as tracking social media sales or OC trafficking. Many police complain that organized crime infiltrates nearly every judicial unit.[65]

TABLE 4: ALERTS AND HOTSPOTS: AMAZON REGION OF COLOMBIA, 2015-2020[66]

		Caquetá	Putumayo	Amazonas	Vaupés	Guaviare	Guainía
2015	DF Alerts	7.7%				9.0%	
	Hotspots						
2016	DF Alerts	356/8.9%	392/9.8%	8/0.2%	0/0%	592/14.8%	0/0%
	Hotspots	4,498	1,422	223	365	2,867	401
2017	DF Alerts	308/7.7%	327/8.2%	148/0.4%	0/0%	320/8.0%	20/0.1%
	Hotspots	8,399	2,612	148	561	5,038	858
2018	DF Alerts	448/11.2%	216/5.4%	120/0.03%	80/.02%	548/13.7%	0/0%
	Hotspots	10,030	2,510	137	453	7,850	759
2019	DF Alerts	419/11%				659/19%/	
	Hotspots	5,831	1,412	80	263	8,302	680
2020	DF Alerts	895/12%				2,520/15%	
	Hotspots	19,054	6,269	546	1,217	13,471	1,851

Causal Model: As mentioned above, deforestation is a good measurement of environmental OC since it is the first step in opening up areas for coca, mining, and transit. Using Colombia's more comprehensive databases, one of the more statistically reliable causal models would thus test the correlation of deforestation alerts of the five drivers of deforestation through the enforcement chain to the policy endpoint of deforestation rates. Here, it is applied across the country's six Amazon departments: Vaupés, Guaviare, Guainía (under the regional body CDA or *Corporación de Desarrollo Sostenible del Norte y el Oriente Amazónico*), Caquetá, Putumayo, and Amazonas (under the regional body Corpoamazonia). It then examines the relationships among the intervening variables: alerts leading to investigation, investigations leading to sanctions, and sanctions decreasing deforestation. Colombia has three types of alerts: fires, deforestation, and hotspots (zones where ecologically destructive and unauthorized activity has been reported). But alerts are not recorded consistently or reliably. The Institute of Hydrology, Meteorology and Environmental Studies (IDEAM) and officials of the Autonomous Regional Corporations (CARs: *Corporaciones Autonomas Regionales*), which oversee environmental policy in the country's regions) only provide general extrapolations, estimating 1,000 alerts each quarter, totaling approximately 4,000 annually.

These alerts then lead to an investigation, but the number of investigations is not reported, and there is no documentation of violations of the regulatory permits described above. The number and types of specific sanctions are provided (see Table 5), but officials from every agency doubt that the effect of investigations or sanctions can be reliably measured or that they are significant. Inconsistency throws the data's reliability further into doubt. There is a divergence of numbers reported by different agencies, while a lack of reports after 2016 indicates a drop in monitoring. Judicial dysfunction worsens data analysis. For example, all 1,150 environmental sanctions imposed by Corpoamazonía from 2009 to 2016 were discarded for contravening due process.

TABLE 5: FINES: SANCTIONS FOR DAMAGES AND VIOLATIONS OF REGULATIONS, 2014–2019

	2014	2015	2016	2017	2018	2019
Caquetá	49	51	66	74	70	77
Putumayo	7	8			1	0
Amazonas						0
Guaviare	1	8	27	20	7	
Guainía		4	10	5	9	2
Vaupés	111					

The rate of alerts from each year between 2015 and 2018 were correlated with the rates of deforestation in the six departments to test whether increased alerts led to decreased deforestation. A negative correlation among those rates would indicate the impact of state enforcement. But initial regression tests show no significant effect for two of the three years in which complete data is available. Changes in 2016–17 were 0.28; in 2017–18, it was -0.100; and in 2018–19, it was -0.59 (See Appendix 2). In short, there is no demonstratable relationship between alerts and deforestation, indicating the ineffectiveness of current enforcement mechanisms and OC policy. Similar results are seen in the five Amazon regions of Peru (see Appendix 2).

TABLE 6: AMAZON DEPARTMENTS: COMBINED LOSS OF PRIMARY FOREST AND TREE COVER, IN HECTARES

	2014	2015	2016	2017	2018	2019
National[66]	140,000	124,035	178,597	219,973	197,159	383,000
Caquetá	29,245	23,812	26,544	60,373	34,527	30,317
Putumayo	11,106	9,214	11,117	13,070	13,903	10,759
Amazonas	1,723	1,277	1,913	1,362	782	1,139
Guaviare	6,892	9.364	11,456	38,211	34,527	24,220
Guainía	1,300	1,350	2,752	847	2,390	1,433
Vaupés	1,967	1,116	1,949	2,288	1,123	2,059

POLICY RECOMMENDATIONS

Most of LAC's more effective criminal policies—new police units, penal code reforms—are better suited for fixed structures than fluid realities. A new policy must instead adopt the characteristics of the entities it faces, such as operational flexibility, on-the-ground communication, and continuous assessment. This section outlines seven concrete areas in which to initiate such an approach.

1. Security Official Training and Careers: The ways in which security officials work individually and collectively against OC need greater attention. One of the biggest obstacles to coherent OC policy is interagency competition for resources, power, and territorial control. An example of this approach is Colombia's military-led *Burbujas Ambientales*, in which representatives of the armed forces, police, *Fiscalía*, civil society organizations, NGOs, indigenous federations, and other key actors meet biweekly to discuss action against environmental OC. Such meetings expose gaps in knowledge, policy differences, and weaknesses in evaluation. They also narrow down policy to shared interests and motivations, making policy narrower but ultimately more sustainable. Structured collaboration also boosts professionalism and coordination, which also helps strip policy of unrealistic aims and administrative obstructions. As of 2020, the *Burbujas* had 32 control posts to report information in real-time, and the consortiums combined it with other local and national data (supported by IDEAM's daily reports) in a CompStat approach to continuously adjust operational policy.

On an individual level, an assessment must also be made of the career regulations and practices that limit OC expertise and objective evaluation, such as frequency and criteria for rotation among locations and units, individual and unit-level accountability, and informal rules and discretion for promotion. Curriculum adjustments are also needed; for example, only 30 hours are dedicated to the intelligence cycle in most LAC police academies, which is only about a third of what would be needed for long-term OC specialization. Another needed institutional reform is of Internal Affairs, which should be strengthened not just to ensure accountability for abuses, but also to assist officers with professional and personal pressures, which can unlock ideas for personal and policy reforms.

2. OC Surveillance Dashboards: To fortify policymaking, a surveillance dashboard can use supervised machine learning to secure, analyze, and disseminate data from target locations, such as OC hubs like Petén or Olancho. Such a dashboard can bring together detailed socioeconomic, legal, demographic, environmental, and other relevant data gathered by NGOs and private firms to detect often overlooked patterns and correlations that capture the full picture of the constantly changing local conditions that allow OC to blend into local socioeconomic activity. Drawing on models like the Wildlife Trade Portal and the Tracking Natural Resource Corruption initiative, such an approach will provide the intelligence needed to lay out a causal model inclusive of all conditions. Among the many stages on the logging chain, for example, are land titling, species verification, indigenous

community approvals, transport permits, and access to controlled substances like mercury. Specifying how state agencies, non-state actors and local conditions subvert each of those stages will lead to a more accurate stress test for OC policy. Such social network analysis helps map out the overlapping and constantly shifting alliances, and a dashboard will make them visible on a platform for ongoing spatiotemporal analysis.

3. Crime as a Variable: Methodological approaches need to examine specific forms of OC as both an independent and dependent variable—that is, as a product and a cause of other conditions. A policy goal of SOUTHCOM, for example, is to determine the push factors of migration from Central America. One of the most common is extortion: nearly everyone in the region engaged in economic activity—from multinational corporations to street corner food sellers—pays extortion fees. As one Honduran said, "We would rather pay a *coyote* for the American dream rather than an extortionist for our daily nightmare."[67] But as a pervasive and amorphous form of crime, how can extortion be approached methodologically in a way that informs policy? First, demographic and economic characteristics, such as the percentage of youth or women as household heads, can be used as independent variables to determine their quantitative causation with levels of extortion from specific regions. Such findings can support local projects of SOUTHCOM's Women, Peace, and Security program. With extortion rates as an independent variable, policymakers then need to examine its differentiated damages, such as its impact on different kinds of businesses, such as the health and transportation sectors.

At each stage of this causality, the source of all data must be questioned. Guatemalan officials estimate that just one in three cases of extortion are reported, for example, but can cite no methodology or sources for that estimate. More broadly, if a jurisdiction reports an 80 percent increase in kidnappings one year and an 80 percent decrease the next—which happened in Mexico—it is necessary to investigate the reliability of these statistics or the sources of such a drastic change. Similarly, OC policy in LAC lacks methodologies centered on time lags to measure a policy's potential future impacts, while in other cases, local data is uneven. The comprehensive approach of Mexico's *Sistema Único de Información Criminal* (SUIC) centers on gathering data on all forms of crime, such as stolen cars, names of private security agents, and the location of arms reserves. But up to 30 percent of municipalities do not send enough data to allow SUIC to apply nationwide analysis. Such patchy data then prevents the detection of connections between criminal groups. Since one tested approach with a built-in capacity to address this range of quantitative deficiencies is CompStat, OC needs a multidimensional CompStat to assess the reliability of reported numbers and then apply it to map out the effects of operations and policy over multiple future scenarios. An example of a starting point for such an undertaking is Honduras's *Plan de Erradicación de Demoras Judiciales*, which identifies backlogs in each courthouse. A CompStat approach can then use those numbers to create a quantitative prediction and assess how well each court will handle OC cases over time. The integral use of technology can support (though never constitute) this approach. Examples include forms of blockchain or online accounting, such as Brazil's *Documento de Origem Florestal,* to track each stage of the forestry production chain.

4. Geospatial Analysis: One of the most common but weakest methodological dimensions of criminological policy is displacement. On firearms, for example, illegal imports easily move to smaller ports or land crossings in response to stepped-up enforcement in another. On extortion, the police chief of Mixco, a high-crime city in the Guatemalan capital metro area, acknowledged that his successes increase OC in nearby cities with similar conditions. But a lack of coordination and capacity means that such shifts remain unmeasured and detached from national policy. Regarding environmental crime, one of the few studies of displacement found that in "78.2 percent of documented leakage cases, reduced deforestation in protected areas was not sufficient to offset the amount of deforestation in 10 km buffer zones to a level that would be expected without protection."[68] But while forest coverage can be measured relatively easily, other OC movements—money, people, and narcotics—cannot. Responses to this challenge include time-lagged spatial analysis to analyze criminogenic changes over time in defined spaces. For example, policymakers can examine how physical space raises OC risks

in zones like transport hubs, informal markets, and sports fields. Because types of crime are less adaptable than location, it would be expected that groups extorting passengers and drivers in a bus terminal subject to police action are likely to move to another bus terminal rather than to a new type of crime. Such a study can help determine the utility of strategies like CPTED (Crime Prevention through Environmental Design).

5. Tracking Democracy: OC policymakers should develop a triangulated understanding of how institutional capacity, political pressures, and public opinion shape OC policy amid democratic deterioration. For example, one of the biggest reasons for the delayed, politicized, and needlessly complicated transition to oral-based criminal procedures throughout LAC were attacks on it being soft on criminals. Warning signs about how current politics may undermine OC policy include:

• Horizontal Accountability: LAC executive branches leverage their administrative control of security agencies to monopolize criminal policy, which legislatures—often dominated by the ruling party or fragmented among the opposition—struggle to check. Policy focus should therefore be on creating more autonomous investigation by legislative commissions.

• The Judiciary: Ongoing realization of LAC's judicial fragility must be followed up by identifying specific points of weakness and augmenting specialization, such as through existing circuits on corruption and the environment, and—following models in a place like New York—on firearm crimes.

• Impunity: The high rate of those unpunished for serious crimes is just one aspect of impunity. A connected but equally harmful dimension is the ensconced popular belief that many sections of the population are exempt from the law—from ordinary criminals to political elites—which increases the appeal of extra-legal justice, simplistic populist policies, and other forms of democratic deterioration.

6. National Community Oriented Policing (COP): Although it is one of the most significant paradigms and policy shifts in LAC crime policy, COP has foundered because of weak institutional buy-in, hostile political rhetoric, and, in cases of progress, displacement of crime to adjacent regions. Such weaknesses can be supplemented through such strategies as:

▪ Local design and assessment: When a COP program is designed or run by the community itself, it can withstand even high levels of OC and daily criminality, as in Danlí, Maracaibo, and La Paz. Key to their sustainability is panoramic assessment: COP needs structured and continual assessment by residents to identify weak points, such as lack of representation or policy clarity. To help residents address those problems, cities with COP should have mandatory weekly meetings among security and social services, as Choloma has done for several years.

▪ Continuing training: LAC's COP has been more complementary than integral, allowing local police to sideline it. Such resistance will ultimately be overcome through three key steps: realigning police academies and ongoing training, as in Honduras' Police Technical Institute curriculum; encouraging buy-in from officers by integrating COP with intelligence gathering and providing more scheduling flexibility for lower-level officers, and improving top-down administration to limit local commissioners from being subject to constant operational and personnel shifts from above.

7. Border Area Studies: As mentioned above, a focus on how border areas foment OC is greatly needed. It is also elusive, given the multitude of locations and conditions involved. But several practical angles can be used. One example is a much more comprehensive analysis of decentralization, which has been the most comprehensive and necessary transformation in Latin America because it makes the government more receptive to local problems. Yet, in the security realm, it is characterized by a lack of preparation, resources, and adequate coordination. A metropolitan area that needs a single policy may have up to a dozen different municipal-led police agencies. Venezuela's 1989 Decentralization Law, for example, spurred an increase from 21 to 126 police agencies, contributing to a 200 percent increase in crime. In other words, a comparative examination of local government can uncover vulnerabilities in border area security and OC. Another approach is university-based regional collaboration. Amid democratic deterioration, OC policy needs

more stable, trusted, and objective institutional grounding. One such basis are universities in OC hotspots, which have the community trust, professional expertise, institutional permanence, and political neutrality needed for the long-haul fight against OC. One such network in the Amazon Basin is composed of the Universidade Federal of Minas Gerais and of Rondônia in Brazil, Colombia's Universidad de la Amazonia, the University of Guyana, Universidad Nacional Agraria de la Selva in Perú, and Suriname's Adem de Kos University.

END NOTES

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2. The Attorney-General's anti-extortion unit estimates Cantel was the source of 95 percent of extortion cases in the southwestern part of Guatemala; Author Interview, Emma Flores, Fiscalía contra Extorsiones, Guatemala City, June 29, 2021.

3. Author interview with Julio Quemé, Quetzaltenango, Guatemala, June 29, 2021.

4. Paul Amar, "Mubarak's Phantom Presidency," *Al-Jazeera*, February 3, 2011, www.aljazeera.com/opinions/2011/2/3/mubaraks-phantom-presidency.

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9. See, among others, Ernst Falko, "Mexico's Hydra-Headed Crime War," International Crisis Group, June 3, 2019, www.crisisgroup.org/latin-america-caribbean/mexico/mexicos-hydra-headed-crime-war.

10. Julie López, "Un narcovuelo aterriza cada diez días desde 2019," *Prensa Libre*, April 26, 2021, www.prensalibre.com/pl-plus/guatemala/justicia/por-que-una-aeronave-con-cocaina-aterriza-en-guatemala-cada-diez-dias-desde-2019/.

11. Author interviews, Flores, Guatemala, February 2017.

12. Author interviews former residents and officials of the ETCR at Agua Bonita, November 29-30, 2019.

13. Guatemala's "NGO Law" (Decree 4-2020) empowers the government to "unregister" NGOs without a legal procedure, along with giving it more control over internationally-sourced funds.

14. With approximately 450 armed men, *Los Puntilleros* are comprised of member of the groups also known as the Libertadores del Vichada and the Meta Bloc, which are remnants of the paramilitary Popular Revolutionary Anti-Terrorist Army of Colombia (ERPAC: Ejercito Revolucionario Popular Antiterrorista Colombiano), which is classified as a Class A Organized Armed Group, allowing the military to conduct operations like aerial bombardments prohibited against civilian crime suspects. In collusion with FARC dissident groups, *Los Puntilleros* control rapidly expanding drug trafficking routes from central Colombia to Venezuela and Brazil.

15. Author interview, Colonel Federico Alberto Mejía Torres, Commander, Brigada de Selva No. 22, Colombia, April 2018.

16. Author interview, Sara Sandoval, July 1, 2021. Several national banks, such as Mexico's Banco Azteca, are notorious for poor cooperation with organized crime investigations.

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APPENDIX 1: ARMS TRAFFICKING AND USE IN HONDURAS

TABLE 1: HOMICIDES AND HOMICIDES CAUSED BY FIREARMS

Year	Homicides/100,000 persons	State Response	Security Secretariat	Info Segura	Sepol
2015	57.5-60.0	45.03%	75.0%	76.4	70.5% of all cases
2016	56.5-59.1	44.80%	75.9%	76.9	
2017	41.7-43.5	31.07%	71.7%	72.6	
2018	40.0-41.4	29.05%	71.0%	71.7	
2019	41.2-43.6	26.3%	74.6%		

TABLE 2: ESTIMATED NUMBER OF ARMS IN HONDURAS, REPORTED 2017-2019

National Congress	University Institute for Democracy, Peace and Security	United Nations Development Programme	Security officials, activists, specialists
400,000	650,000	700,000–800,000	1.0–1.2 million (2019)

TABLE 3: LINEAR REGRESSION: MODEL SUMMARY

										Durbin-Watson		
Model	R	R^2	Adjusted R^2	RMSE	R^2 Change	F Change	df1	df2	p	Autocorrelation	Statistic	p
1	0.000	0.000	0.000	9.204	0.000		0	4		0.412	0.748	0.075

Coefficients

							95% CI	
Model		Unstandardized	Standard Error	Standardized	t	p	Lower	Upper
1	(Intercept)	49.520	4.116		12.031	< .001	38.092	60.948

Descriptives

	N	Mean	SD	SE
V5	5	49.520	9.204	4.116

Residuals Statistics

	Minimum	Maximum	Mean	SD	N
Predicted Value	49.520	49.520	49.520	0.000	5
Residual	-8.120	10.480	-7.107e-16	9.204	5
Std. Predicted Value					5
Std. Residual	-0.986	1.273	-1.110e-16	1.118	5

APPENDIX 2

TABLE 1: DEFORESTATION IN COLOMBIA REGRESSION ANALYSIS

Alerts	2016	*Ch 16-17*	2017	*Ch 17-18*	2018	*Ch 18-19*	2019
Caquetá	4,498	47	8,399	16	10,030	-42	5,831
Putumayo	1,422	46	2,612	-4	2510	-44	1412
Amazonas	223	-34	148	-7	137	-42	80
Guaviare	2,867	43	5,038	36	7850	5	8302
Guainía	401	53	858	-12	759	-10	680
Vaupés	365	35	561	-19	453	-42	263

Significance:		**0.276229**		**-0.10077**		**-0.59699**	
Deforestation	2016	*Ch 16-17*	2017	*Ch 17-18*	2018	*Ch 18-19*	2019
Caquetá	26,544	56	60,373	-43	34,527	-12	30,317
Putumayo	11,117	15	13,070	6	13,903	-23	10,759
Amazonas	1,913	-29	1,362	-43	782	31	1,139
Guaviare	11,456	70	38,211	-10	34,527	-30	24,220
Guainía	2,752	-69	847	65	2,390	-30	1,433
Vaupés	1,949	15	2,288	-51	1,123	45	2,059

TABLE 2: DEFORESTATION IN PERU

Alerts			2017	0.919751	2018	0.62035	2019
Madre de Dios			314,203	-69.5	95,746	-77	21,899
Amazonas			95,318	-83.6	15,686	-64	5,599
Loreto			197,006	-38	122,048	-80	23,496
San Martin			127,274	-46	68,742	-83.6	11,266
Ucayali			314,203	-74	81,562	-55	36,339

Significance:		0.297234		0.538556		-0.00744	
Deforestation	2016	*Ch 16-17*	2017	*Ch 17-18*	2018	*Ch 18-19*	2019
Madre de Dios	17,055	28	23,669	-0.8	23,492	-13	20,500
Amazonas	6,984	17	8,455	-12	7,453	-13	6,470
Loreto	37,151	-49	19,082	27.2	26,203	17	31,400
San Martin	20,589	-39	12,501	41.5	21,376	-29	15,100
Ucayali	29,611	1	29,905	-13.1	25,991	38	42,100

Red Lists	Y2016	*Ch 16-17*	Y2017	*Ch 17-18*	Y2018	*Ch 18-19*	Y2019
Madre de Dios	35	-34	23	-78	5	-500	0
Amazonas	9	19	11	-55	5	-80	1
Loreto	60	21	76	15	89	-72	25
San Martin	2	-200	0	0	0	0	0
Ucayali	13	-85	2	0	2		0

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