



Review Article

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Overview of Environmental Crimes in Latin America Over the Last Five Years: A Systematic Review

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ABSTRACT

This systematic review had as general objective to analyze the panorama of environmental crimes in Latin America over the last five years. Methodologically, a qualitative approach and the PRISMA strategy were employed to select a total of twenty-one articles from the Scopus and Web of Science databases, which allowed the analysis of the aforementioned topic. The results revealed a critical overview in Latin America, being the main forms, illegal logging, illegal mining, and wildlife trafficking. Current trends evidence regulatory setbacks, increased violence against environmental defenders, and fragmented institutional responses. The associated socioeconomic factors include poverty and the lack of economic alternatives in vulnerable communities. It is concluded that there is a systematic gap between regulatory frameworks and their effective compliance, which configures a scenario of impunity that disproportionately affects vulnerable communities and calls for profound transformations to address the structural factors of power, corruption, and social inequality.

Keywords: *environmental crimes; crimes; environmental law; Latin America; criminal law.*

Panorama de los delitos ambientales en Latinoamérica en los últimos cinco años: una revisión sistemática

RESUMEN

La presente revisión sistemática tuvo como objetivo general analizar el panorama de los delitos ambientales en Latinoamérica en los últimos cinco años. Metodológicamente, se empleó el enfoque cualitativo y la estrategia PRISMA para seleccionar un total de veintiún artículos de las bases de datos Scopus y Web of Science que permitieron el análisis de la temática mencionada. Los resultados revelan un panorama crítico en Latinoamérica, siendo las principales modalidades el aprovechamiento forestal ilícito, la minería ilegal y el tráfico de vida silvestre. Las tendencias actuales evidencian retroceso regulatorio, incremento de violencia contra defensores ambientales y respuestas institucionales fragmentadas. Los factores socioeconómicos asociados incluyen pobreza y falta de alternativas económicas en sectores vulnerables. Se concluye que existe una brecha sistemática entre marcos normativos y su cumplimiento efectivo, lo cual configura un escenario de impunidad que afecta desproporcionadamente a comunidades vulnerables y demanda transformaciones profundas que aborden los factores estructurales de poder, corrupción y desigualdad social.

Palabras clave: *delitos ambientales; crímenes; derecho ambiental; Latinoamérica; derecho penal.*

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INTRODUCTION

In worldwide level, environmental crimes represent a persistent and large-scale threat, with seizure records between 2015 and 2021 that document illegal trade in 162 countries and territories, affecting approximately 4,000 plant and animal species (United Nations Office on Drugs and Crime, 2024). Despite regulatory and jurisprudential advances in environmental matters, structural underprotection persists in the face of serious, systematic, and transnational environmental harm (Martín Aragón, 2024).

In this regard of this, Arias Benavides and Etcheverry Carrera (2024) have affirmed that in the last years the environmental crimes have been characterized by the expansion of illegal activities such as unregulated mining, deforestation, wildlife trafficking, and the contamination of water resources. This problem not only reflects the persistence of an extractivist model that prioritizes economic benefit over sustainability, but also demonstrates the structural limitations of judicial systems in effectively investigating, punishing, and repairing such harm (Freitas and Balzan, 2024).

For its part, in the Latin American context, regulatory and political development in environmental matters has been strongly influenced by international and regional commitments, such as the Stockholm Declaration on the Human Environment (1972) and the Rio Declaration on Environment and Development (1992). In addition to the foregoing, the recent Escazú Agreement (2018), signed by several Latin American countries, constitutes a milestone in the face of the persistence of high levels of impunity, institutional limitations in the prosecution of environmental crimes, and violence against environmental defenders. In this regard, this body of international regulations constitutes a series of relevant legal tools for improving transparency, strengthening reporting mechanisms, and guaranteeing more effective judicial protection against environmental harm in the region.

Nevertheless, this region has experienced an alarming increase in environmental crimes, characterized by illegal deforestation, unregulated mining, wildlife trafficking, and land grabbing (Alonso Tapia et al., 2024). Despite significant regulatory advances, such as the recognition of the rights of nature in Ecuador, systematic practices of illegal exploitation, deforestation, irregular mining, and pollution persist, which not only degrade biodiversity but, on the other hand, also violate the territorial and cultural rights of indigenous peoples and local populations (Menza Ortega et al., 2024).

In this way, the corresponding question was raised in relation to the problem posed: what is the panorama of environmental crimes in Latin America in the last five years? This approach made it possible to comprehensively understand the current situation of environmental crime in a region characterized by high biodiversity, but also by intense processes of natural resource exploitation, socio-environmental conflicts, and structural inequalities.

Meanwhile, regarding the general objective, it was aimed at analyzing the panorama of environmental crimes in Latin America in the last five years. In a complementary manner, the following specific objectives were established: to identify the main forms of environmental crimes in Latin America in the last five years; to describe the current trends regarding environmental crimes in Latin America in the last five years; and to examine the socioeconomic factors related to environmental crimes in Latin America in the last five years.

The foregoing is supported by Sustainable Development Goal 15, which seeks to strengthen global support to combat poaching, trafficking in protected species, and environmental pollution (Gómez Isa, 2022). Nevertheless, persistent legislative fragmentation, corruption

within control agencies, and limited cross-border judicial cooperation have created an environment of low risk and high profitability for perpetrators (Conopioima Moreno, 2023).

This research is justified in the need to comprehend the way in which environmental crimes have been configured in Latin America in recent years. It should be emphasized that this region presents a scenario of intense exploitation of natural resources, expansion of illicit activities, and recurrent harm to vulnerable communities. Therefore, although there are scattered studies and reports, there is still a lack of an integrated perspective that describes the main criminal modalities, their recent trends, and the socioeconomic factors that explain them, which makes it difficult for the justice system and public policies to provide a coherent response. In this regard, this systematic review seeks to provide an updated diagnosis that makes the magnitude of the phenomenon visible, identifies knowledge gaps, and provides useful inputs to strengthen the criminal protection of the environment and the rights of affected populations.

Regarding the theoretical development that supports the present research, it should be mentioned that, since the second half of the twentieth century, and with greater intensity in recent decades, criminal law doctrine has begun to discuss environmental criminal law as a specialized subsystem, characterized by a strong preventive approach, high technical-scientific complexity, and a close connection with international environmental law and the commitments assumed by States regarding sustainable development (Torres and Velandia, 2022). In this context, environmental crimes are configured as a set of ultima ratio tools in response to the insufficiency of administrative, civil, or merely economic mechanisms to contain phenomena such as massive deforestation, illegal mining, wildlife trafficking, or persistent industrial pollution (Vucetich Huaracallo et al., 2025).

Thus, the study of environmental crimes requires starting from a conception of the environment as a collective, diffuse, and supra-individual legal interest, whose protection is essential for the preservation of life, public health, and the material conditions of existence of present and future generations (Rojas Vizcarra, 2025). From a doctrinal perspective, environmental crimes are defined as those typical, unlawful, and culpable conducts that cause serious harm or significant risk to the balance of ecosystems, biodiversity, or natural resources, and which, due to their particular harmfulness, have been subject to a qualified criminal response (Mendoza Escalante and Mendoza Rojas, 2024). Unlike other unlawful offenses that protect individual legal interests, environmental criminality is aimed at safeguarding a common interest that transcends state borders and is closely linked to the human right to a healthy environment, recognized by various human rights protection systems (Cabrera Guirao and Correa Robles, 2022).

The theoretical and regulatory evolution of environmental crimes shows a trend toward expanding criminal liability, incorporating not only natural persons but also legal entities, particularly companies involved in extraction, production, or commercialization chains with significant environmental impact (Matallín Evangelio, 2022). This responds to the observation that many of the most harmful conducts are carried out within complex organizations with economic capacity and influence, which requires criminal instruments capable of discouraging harmful corporate practices (Torres Fernández et al., 2021).

Another relevant theoretical axis is the analysis of organized and economic criminality associated with environmental crimes, which affect all individuals in general who coexist within a given geographical area (Moreno Oliver and Paredes Infanzón, 2024). Unlike the traditional view focused on the individual offender, in the Latin American context many of these conducts are carried out within complex networks of extraction, transportation, and commercialization. These structures operate with large volumes of resources and are linked

to international circuits and markets, as in timber trafficking, the illicit trade in species, or gold mining (Castro Salazar et al., 2023).

In this way, environmental crimes and the legal interest they protect are part of a contemporary vision of criminal law, aimed at safeguarding highly relevant collective interests and responding to structural threats that compromise both the natural environment and the effective exercise of human rights (Tapia Liendo, 2022).

Undoubtedly, this has led legal doctrine to engage in dialogue with green criminology and studies on organized crime, emphasizing that environmental crimes are not merely “collateral damage” of development, but highly profitable activities that compete with other forms of economic criminality (Martínez Pérez and Ramírez González, 2021). Hence, the need arises for criminal law approaches that integrate tools such as extended confiscation, asset tracing, international judicial cooperation, and the liability of legal entities, as well as financial and asset investigation measures.

METHODS

The present research was qualitative in nature, since this approach seeks to understand social or human phenomena through the use of interpretive tools that make it possible to comprehend the complexity of social realities through an inductive and holistic process (Montero Ramírez, 2024). In turn, the PRISMA strategy (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) was used, which is an evidence-based methodological statement that establishes a minimum set of elements for the preparation and transparent reporting of systematic reviews and meta-analyses (Espinoza-Freire, 2025).

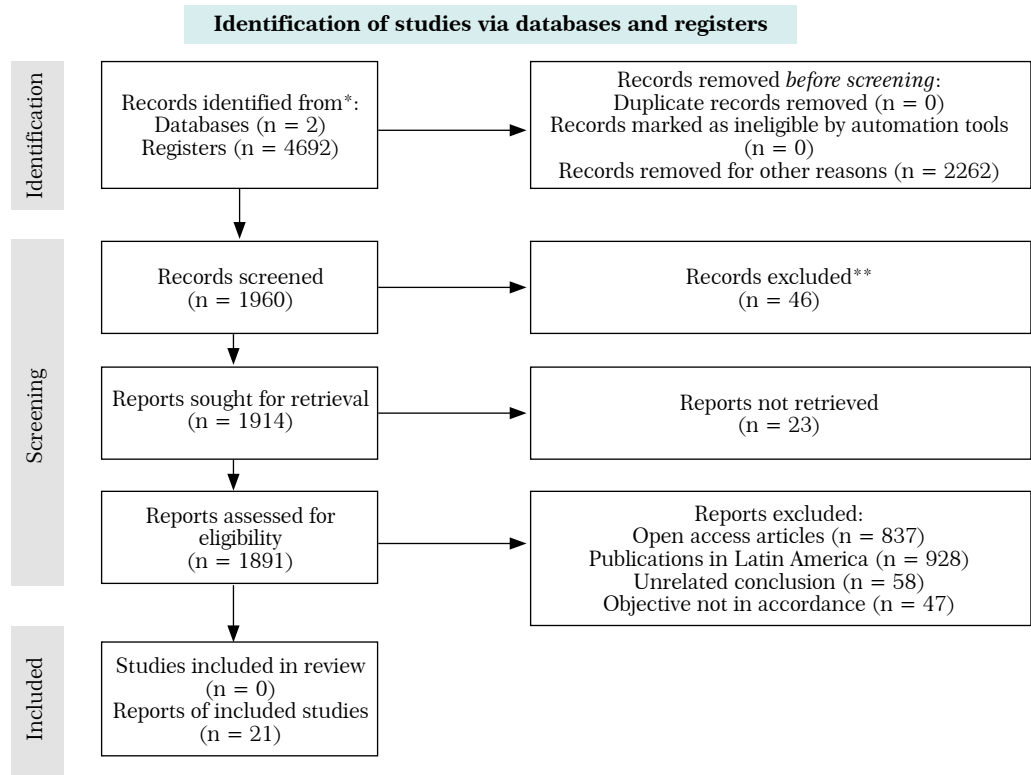
On the other hand, the collection of information was carried out in renowned academic databases, such as Scopus and Web of Science, using combinations of keywords “(delitos AND ambientales) OR (crimes AND environmental)” related to the subject under study. As inclusion criteria for this systematic review, scientific articles published in the last five years, that is, between 2021 and 2025, that addressed environmental crimes in Latin America were considered. Only studies with open access to the full text and that were directly related to the objective of the research were selected. Regarding the exclusion criteria, duplicate articles, studies without full-text availability, research older than five years, and those that did not specifically and directly address the subject of this systematic review were excluded.

Next, Figure 1 presents the procedure followed for the selection of the articles included in the present study, which ultimately resulted in twenty-one studies that contribute to the fulfillment of the objective established in this systematic review.

On the other hand, with the purpose of strengthening the methodological rigor of the present systematic review and reducing the risk of incorporating low-quality evidence, an assessment of the risk of bias of the included studies was carried out using the ROBINS-I tool (Risk Of Bias In Non-randomized Studies of Interventions). This assessment considered aspects related to the selection of studies, the quality of the reported information, methodological consistency, interpretation of results, and the possibility of biases derived from the available evidence. Figure 2 presents the synthesis of the assessment carried out on the twenty-one selected articles.

The results of the assessment through ROBINS-I evidence that most of the studies present a low or moderate risk of bias, which supports their inclusion in the review. However,

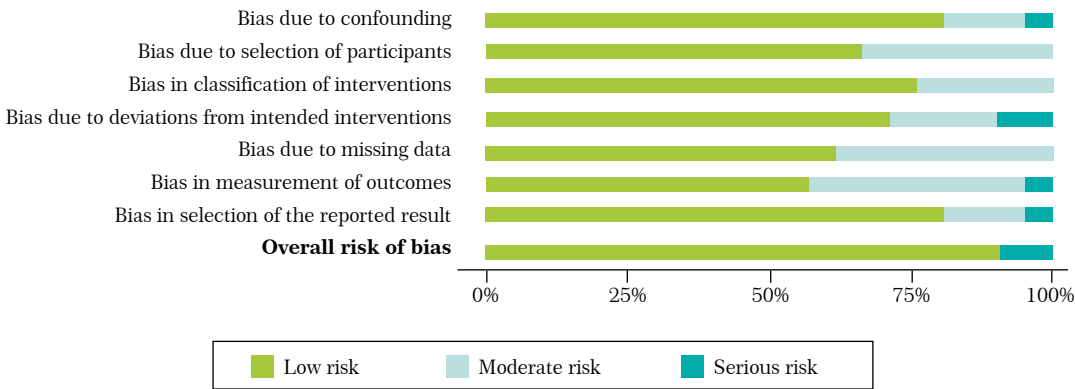
Figure 1
Information search flow diagram



Note. The model of the figure was extracted from Page et al. (2021).

potential sources of bias related to the exclusive selection of articles indexed in Scopus and Web of Science were identified, as well as a marked concentration of research conducted in Brazil, which could limit the regional representativeness of the findings. Likewise, some studies are based on documentary and institutional sources that may be susceptible to information bias. Despite this, the consistency of results across studies from different contexts strengthens the consistency of the evidence analyzed.

Figure 2
Risk of bias assessment of the included studies



Note. The risk of bias assessment for each included study is detailed at https://drive.google.com/file/d/10VILbN_MuVRZm9bNnca-VrWZe_X9btXXX/view?usp=sharing

RESULTS

The twenty-one articles that met the inclusion criteria were classified according to Table 1 based on the following aspects: (1) author and year, (2) database, (3) country, and (4) main finding.

Table 1
Classification of the selected articles

Author and year	Database	Country	Main finding
Oliveira and Braga (2023)	Web of Science	Brazil	Persistence of non-compliance in the remediation of corporate environmental damage.
Benoit Costa et al. (2024)	Web of Science	Brazil	Fraudulent use of forest plans to conceal illegal timber.
Cabrera Suárez (2023)	Web of Science	Colombia	High incidence of illegal forest exploitation associated with socioeconomic factors.
Carpio Domínguez et al. (2025)	Web of Science	México	Institutional limitations in combating wildlife trafficking.
Cerón Rincón y Sierra-Zamora (2025)	Web of Science	Colombia	Expansion of organized crime in the Amazon and weakening of environmental governance.
Clerici et al. (2024)	Web of Science	Latin American countries	Relationship between deforestation and violence against environmental defenders.
De Souza-Lima et al. (2024)	Web of Science	Brazil	Increase in environmental crimes associated with extractive policies.
Esparza Rodríguez et al. (2025)	Web of Science	Mexico	Structural deficiencies in the governance of wildlife crimes.
García Jiménez and Vargas Rodríguez (2021)	Web of Science	Mexico	Link between deforestation, impunity, and organized crime.
Gonçalves Ribeiro et al. (2024)	Web of Science	Brazil	Need to strengthen environmental protection from the perspective of green criminology.
Iglesias Rossini (2024)	Scopus	Uruguay	Absence of comprehensive classification of environmental crimes.
Le Clercq y Cedillo (2022)	Web of Science	Mexico	Existence of high levels of environmental impunity.
Melo Reghelin (2022)	Scopus	Brazil	Importance of abstract endangerment crimes in environmental protection.
Mendonça Magliano (2022)	Scopus	Brazil	Need to improve the economic assessment of environmental damage.
Nahon da Costa et al. (2024)	Scopus	Brazil	Association between socioeconomic variables and environmental criminality.
Ruiz Arias (2021)	Web of Science	Colombia	Unequal impact of environmental crimes on vulnerable populations.
Saad-Diniz and Gianecchini (2021)	Web of Science	Brazil	Regulatory regression and increase in environmental victimization.
Santos et al. (2021)	Web of Science	Brazil	Institutional limitations for the control of environmental crimes.
Roque (2024)	Scopus	Brazil	Debate on the application of the principle of insignificance.
Vallejos et al. (2024)	Web of Science	Chile	Poaching operates as an organized form of environmental criminality.
Vera Vega and Mayer Lux (2024)	Scopus	Chile	Limitations of the new Chilean system of environmental crimes.

Table 1 summarizes the main findings identified in the twenty-one selected studies. In order to facilitate reading and comparison among the studies, only the central results of each study are presented, while the detailed analysis of their conclusions is developed in the subsequent sections corresponding to the general objective and the specific objectives of the systematic review.

Regarding the temporal distribution, four publications were identified in 2021, three in 2022, two in 2023, nine in 2024, and three in 2025. These results show a significant increase in academic interest during 2024, the year that concentrated the highest number of studies on environmental crimes in Latin America.

On the other hand, Table 2 grouped the countries in which the articles related to the research topic were conducted, as shown below.

Table 2
Countries in which the included Latin American studies were conducted

Country of study	No. of Articles	Percentage (%)
Brazil	10	47.62 %
Chile	2	9.52 %
Colombia	3	14.29 %
Mexico	4	19.05 %
Latin American countries	1	4.76 %
Uruguay	1	4.76 %

According to Table 2, a clear predominance of studies on environmental crimes conducted in Brazil can be observed, with ten articles identified in this country, representing 47.62% of the total. In second place, Mexico accounts for four articles (19.05%), followed by Colombia with three articles (14.29%). For its part, Chile contributes two articles (9.52%). Finally, one article (4.76%) with a focus on Latin American countries and one additional study (4.76%) conducted in Uruguay were recorded.

Now, regarding the general objective concerning the Latin American panorama of environmental crimes, the findings obtained from the systematic review of twenty-one studies reveal a critical scenario characterized by systematic impunity, institutional weakness, and the convergence between environmental criminality and other forms of organized crime. Le Clercq and Cedillo (2022) characterized the Mexican situation as a critical panorama of environmental impunity, where the institutional inability to investigate, sanction, and repair environmental crimes and damage has become a recurring pattern that is not limited to legally defined offenses, but also includes megaprojects, deregulated resource extraction, socio-environmental conflicts, and attacks against environmental defenders.

While Oliveira and Braga (2023) illustrate the systematic gap between apparently robust regulatory frameworks and their practical application, especially when offenders are corporate actors with the economic capacity to evade responsibilities. Regarding Iglesias Rossini (2024), the author pointed out that Uruguay currently lacks a specific criminalization of environmental crimes in its Criminal Code, with only one isolated environmental crime existing outside it. For their part, Vera Vega and Mayer Lux (2024) identified that the new Chilean system of environmental crimes, established by Law No. 21.595, presents excessive casuistry that hinders effective application to serious conduct such as noise pollution, the introduction of predatory species, or liability by omission.

From a dogmatic perspective, Melo Reghelin (2022) argued that the effective protection of the environment as a diffuse and intergenerational right requires the adoption of the category of abstract endangerment crimes in environmental criminal law. Complementarily, Roque (2024) analyzed the possibility of applying the principle of insignificance to environmental crimes of accumulation, concluding that this would only be possible under the criterion of the “reprehensibility of the conduct.”

Regarding the first specific objective, aimed at identifying the main forms of environmental crimes in Latin America, García Jiménez and Vargas Rodríguez (2021) documented how massive deforestation in western Mexico results from governmental passivity, impunity, and the infiltration of organized crime into the forestry industry, where the lack of enforcement of environmental laws, reduced budgets for key institutions, and corruption networks have allowed criminal groups to control illegal logging. Similarly, Cabrera Suárez (2023) identified a high rate of illegal forest exploitation in Colombia, driven by socioeconomic factors such as poverty, forced displacement, and the lack of economic alternatives for local communities.

For their part, Cerón Rincón and Sierra-Zamora (2025) documented that the Amazon faces a significant increase in transnational organized crime activities, such as illegal mining and drug trafficking, which generates power vacuums and weakens state governance. This situation falls within what de Souza-Lima et al. (2024) termed a “socio-environmental necropolitics,” evidencing a significant increase in environmental crimes in the Legal Amazon, including deforestation, forest fires, illegal mining, and invasions of indigenous territories.

Likewise, Carpio Domínguez et al. (2025) evidenced that police capacity to combat wildlife trafficking in Tamaulipas is severely limited by the prioritization of crimes with a high social impact, such as drug trafficking, the lack of knowledge regarding environmental procedures, corruption, and the influence of organized crime. In addition, Esparza Rodríguez et al. (2025) identified that the governance of wildlife crimes in Mexico presents serious structural deficiencies, characterized by low budgetary efficiency, high levels of impunity, and an alarming decrease in conviction rates.

Regarding the second specific objective, aimed at describing current trends concerning environmental crimes in Latin America, Saad-Diniz and Gianecchini (2021) analyzed how the environmental regulatory dismantling promoted during the government of Jair Bolsonaro in Brazil intensified environmental and social victimization. In turn, Clerici et al. (2024) identified that, as deforestation increases, episodes of crimes, threats, and harassment (ECTH) against environmental defenders also increase, particularly those associated with agricultural activities. Furthermore, the findings suggest the existence of an “environmental crime Kuznets curve,” in which the type and magnitude of crimes vary according to the level of socioeconomic development and local governance.

According to Santos et al. (2021), fragmented and insufficient institutional responses constitute a third trend that transcends specific national contexts, identifying a high incidence of crimes against fauna committed mainly by young men with low levels of education and a lack of citizen participation in reporting. Likewise, Ruiz Arias (2021) argued that aporophobia manifests itself in criminal law by favoring white-collar offenders and disproportionately affecting the most disadvantaged victims of environmental crimes.

In the Brazilian Amazon context, Benoit Costa et al. (2024) revealed how sustainable forest management plans, when misused, act as vectors for concealing illegally sourced timber, identifying significant technical and legal irregularities that include the fraudulent movement of timber credits, problems in the chain of custody, irregular transportation, and unauthorized forest exploitation.

Regarding the third specific objective, aimed at examining the socioeconomic factors related to environmental crimes in Latin America, Nahon da Costa et al. (2024) found that socioeconomic and demographic factors, such as income level, population density, and level

of education, are significantly associated with the commission of environmental crimes. In addition, Vallejos et al. (2024) concluded that poaching is an organized and adaptive crime involving specialized actors, advanced technology, and a well-established black market, identifying economic gains, market demand, environmental conditions, and weaknesses in surveillance as key factors.

In response to this problem, Gonçalves Ribeiro et al. (2024) proposed rethinking legal and criminological tools to address environmental degradation perpetrated mainly by States and corporations. Meanwhile, Mendonça Magliano (2022) pointed out that the economic assessment of environmental damage is essential for applying the “polluter pays” principle, but significant challenges persist, such as the lack of clear metrics, the absence of standardized methodologies, and limited institutional experience.

The synthesis of these findings makes it possible to understand that environmental crimes in Latin America constitute a complex phenomenon that cannot be reduced to individual deviant actions, but rather respond to deep structural factors that include socioeconomic inequality, corporate capture of the State, institutional weakness, and systematic impunity. The identified forms share common characteristics: their increasing professionalization and connection with organized crime, their capacity to generate significant economic gains with relatively low risks, and their tendency to disproportionately affect vulnerable populations.

The emerging trends are particularly concerning, especially regulatory rollback and the increase in violence against environmental defenders, which suggests that some national contexts are experiencing processes of deterioration in their institutional capacities and political will to address these crimes. The socioeconomic factors identified require a nuanced understanding that recognizes that, while poverty explains the participation of vulnerable sectors in certain crimes, large-scale and high-impact crimes are perpetrated by corporate actors and organized criminal groups that operate with state complicity. This requires differentiated responses that address both alternative development for vulnerable communities and genuine institutional strengthening to confront corporate and organized environmental criminality.

On the other hand, regarding the limitations of this research, the search was restricted to two databases, Web of Science and Scopus, which may have generated publication bias by excluding relevant research published in gray literature, technical reports, or non-indexed journals. Likewise, although the temporal delimitation to the last five years captured recent trends, it limited the historical context regarding the evolution of regional environmental crimes. Furthermore, reliance on secondary data implies that this review is subject to the limitations, biases, and methodological quality of the primary studies included, without the possibility of independently verifying the original data.

Finally, a relevant limitation of the present review lies in the geographical distribution of the included studies, since, of the total research analyzed, 47.6% corresponds to Brazil, while the remainder is concentrated in Mexico, Colombia, and Chile. This situation evidences an unequal scientific production on environmental crimes in the region and suggests that a significant part of the identified trends reflects problems that are particularly developed in the Brazilian context, especially those related to the Amazon, deforestation, and illegal mining. Consequently, although the review makes it possible to identify common patterns present in Latin America, its results should be interpreted with caution, recognizing that the available regional panorama is conditioned by the greater academic production of certain countries and by the limited evidence from other Latin American nations.

CONCLUSIONS

The present systematic review allows us to conclude that environmental crimes in Latin America have evolved toward increasingly complex and organized forms, characterized by the convergence of illicit economic activities, institutional weakness, and high levels of impunity. Rather than isolated phenomena, these crimes constitute expressions of deficient environmental governance that affect the countries of the region differently and compromise the effective protection of natural resources and vulnerable communities.

Likewise, the findings demonstrate the need to strengthen environmental enforcement mechanisms, cross-border cooperation in addressing organized environmental crime, and the specialization of justice system operators in environmental matters. In terms of public policy, it is a priority to implement comprehensive strategies that combine prevention, control, sanction, and environmental restoration, especially in territories with a high incidence of illegal mining, deforestation, and wildlife trafficking.

Finally, it is recommended that future research expand the analysis to Latin American countries with limited scientific production on the subject, incorporate comparative empirical studies, and evaluate the effectiveness of public policies and environmental criminal prosecution systems, in order to generate evidence that contributes to the design of more effective responses to environmental criminality in the region.

Authorship contribution

NJRG: conception and design of the article, data collection, and drafting.
JECR: statistical advice, data analysis and interpretation, and drafting.

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The research was conducted with own resources.

Conflict of interest

The authors declare that they have no conflicts of interest.

REFERENCES

Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú agreement), March 4, 2018, https://www.dar.org.pe/archivos/publicacion/203_Acuerdo_Escazu.pdf

Alonso Tapia, R. C., Cano More, J. L., Santa Cruz Vargas, K. S., and Quispe Basualdo, R. (2024). El desarrollo sostenible y su implicancia en la Amazonía peruana. una revisión sistemática. *Aula Virtual*, 5(12), 289-304. <https://doi.org/10.5281/zenodo.11301897>

Arias Benavides, A. N., and Etcheverry Carrera, J. A. (2024). Bien jurídico protegido en los delitos contra el ambiente y la naturaleza. *Foro: Revista de Derecho*, (41), 129-147. <https://doi.org/10.32719/26312484.2024.41.7>

Benoit Costa, V. O., Soares Koehler, H., and Gonçalves Robert, R. C. (2024). Characterization of technical and legal irregularities in management plans in the Brazilian Amazon. *Trees, Forests and People*, 16, 100548. <https://doi.org/10.1016/j.tfp.2024.100548>

Cabrera Guirao, J., y Correa Robles, C. (2022). La persecución de la criminalidad medioambiental en Chile: un estudio dogmático y empírico. *Revista de derecho ambiental*, (17), 69-98. <https://dx.doi.org/10.5354/0719-4633.2022.65028>

Cabrera Suárez, J. C. (2023). Delitos ambientales en el manejo forestal del Valle del Cauca: análisis jurídico ambiental. *DIXI*, 25(2), 1-31. <https://doi.org/10.16925/2357-5891.2023.02.03>

Carpio Domínguez, J. L., Cervantes Niño, J. J., Castro-Salazar, J. I., and Mendezcarlo Silva, V. (2025). Policing wildlife trafficking in northeastern Mexico: the case of Tamaulipas in 2023-2024. *Frontiers in Conservation Science*, 6, 1488500. <https://doi.org/10.3389/fcosc.2025.1488500>

Castro Salazar, J. I., Carpio-Domínguez, J. L., and Vargas Orozco, C. M. (2023). Mapas delictivos y análisis espacial de la criminalidad ambiental: México 2006-2018. *Revista Criminalidad*, 65(1), 103-119. <https://doi.org/10.47741/17943108.404>

- Cerón Rincón, A., and Sierra-Zamora, P. A. (2025). Crimen organizado transnacional y paz: seguridad en la Amazonía y gobernanza ambiental regional. *Revista Científica General José María Córdova*, 23(52), 785-802. <https://doi.org/10.21830/19006586.1409>
- Clerici, N., Staudhammer, C., and Escobedo, F. (2024). Disentangling the deforestation-environmental crime nexus in Latin America. *Trees, Forests and People*, 17, 100610. <https://doi.org/10.1016/j.tfp.2024.100610>
- Conopoima Moreno, Y. C. (2023). La naturaleza como víctima ante la perpetración de delitos penales ambientales. *Revista Metropolitana de Ciencias Aplicadas*, 6(1), 55-63. <https://www.redalyc.org/articulo.oa?id=721778122008>
- Stockholm Declaration on the Human Environment, June 16, 1972, <https://www.ordenjuridico.gob.mx/TratInt/Derechos%20Humanos/INST%2005.pdf>
- Rio Declaration on Environment and Development, June 14, 1992, https://transparencia.castillalamancha.es/sites/default/files/documentos/pdf/20210520//08._declaracion_de_rio_sobre_el_medio_ambiente_y_el_desarrollo_1992.pdf
- Esparza Rodríguez, Z., Serio Silva, J. C., Dáttilo, W., and Arroyo Quiroz, I. (2025). Wildlife crime governance in Mexico: an institutional evaluation of capacity, detection, and legal response. *Animal Biodiversity and Conservation*, 48(1), e0009. <https://doi.org/10.32800/abc.2025.48.0009>
- Espinoza-Freire, E. E. (2025). PRISMA en la práctica: guía y desafíos en la conducción de revisiones sistemáticas. *Sociedad & Tecnología*, 8(S2), 623-646. <https://doi.org/10.51247/st.v8iS2.227>
- Freitas, V. P., and Balzan, N. B. (2024). Impactos socioeconómicos del Derecho Ambiental en Brasil. *Veredas do Direito*, 21, e212693. <https://www.scielo.br/j/vd/a/FPBVMdrtZSZ3ywkqZfZqPJK/?format=pdf&lang=es>
- García Jiménez, C. I., and Vargas Rodríguez, Y. L. (2021). Passive government, organized crime, and massive deforestation: The case of western Mexico. *Conservation Science and Practice*, 3(12), e562. <https://doi.org/10.1111/csp2.562>
- Gómez Isa, F. (2022). Los Objetivos de Desarrollo Sostenible (ODS): hacia un nuevo contrato social intra e inter-generacional. *Estudios de Deusto*, 70(2), 191-224. <https://doi.org/10.18543/ed.2650>
- Gonçalves Ribeiro, L. G., Gonçalves Menezes, D., and Leite Sampaio, J. A. (2024). Dialogues between green criminology, criminal law, and environmental protection: Expanding the object of criminology and what criminal law can offer. *Veredas do Direito*, 21, e212706. <https://doi.org/10.18623/rvd.v21.2706>
- Iglesias Rossini, G. F. (2024). Los delitos ambientales en Uruguay. *Revista de Derecho*, 23(46), e462. <https://doi.org/10.47274/DERUM/46.2>
- Le Clercq, J. A., and Cedillo, C. (2022). Números de la injusticia ambiental: la medición de la impunidad en México. *Íconos. Revista de Ciencias Sociales*, (73), 179-200. <https://doi.org/10.17141/iconos.73.2022.5172>
- Martín Aragón, M. del M. (2024). La protección penal internacional del medio ambiente: hacia el delito de ecicidio. *Derecho PUCP*, (92), 55-94. <https://doi.org/10.18800/derechopucp.202401.002>
- Martínez Pérez, I., and Ramírez González, J. C. (2021). La responsabilidad civil y penal de las empresas en materia ambiental. *Estudios y Perspectivas. Revista Científica y Académica*, 1(1), 41-57. <https://doi.org/10.61384/r.c.a.v1i1.4>
- Matallín Evangelio, A. (2022). Mapas delictivos, delitos contra la biodiversidad y responsabilidad penal de las personas jurídicas: una reforma necesaria del código penal. *Revista de Derecho Penal y Criminología*, 28(28), 173-211. <https://doi.org/10.5944/rdpc.28.2022.34159>
- Melo Reghelin, E. (2022). A proteção do meio ambiente como direito difuso na sociedade contemporânea: considerações sobre o princípio da ofensividade penal em delitos de perigo abstrato. *Revista Brasileira de Ciências Policiais*, 13(9), 71-103. https://www.researchgate.net/publication/360983231_A_protecao_do_meio_ambiente_como_direito_difuso_na_sociedade_contemporanea_-_consideracoes_sobre_o_principio_da_ofensividade_penal_em_delitos_de_perigo_abstrato
- Mendonça Magliano, M. (2022). Valoração econômica em perícias de crimes ambientais: por que, para quem e os desafios de realizá-la. *Revista Brasileira de Ciências Policiais*, 13(7), 351-386. <https://doi.org/10.31412/rbcp.v13i7.814>
- Mendoza Escalante, P. R., and Mendoza Rojas, I. A. (2024). Implicaciones jurídicas de la naturaleza como sujeto de derechos respecto de los delitos ambientales del COIP-Ecuador. *AXIOMA*, 1(30), 49-55. <https://doi.org/10.26621/ra.v1i30.917>
- Menza Ortega, E. J., Chapi Chenas, M. Á., and Santander Moreno, J. J. (2024). Delitos contra el medio ambiente y la naturaleza en la protección de los derechos ambientales. *Verdad y Derecho. Revista Arbitrada de Ciencias Jurídicas y Sociales*, 3(especial), 444-453. <https://doi.org/10.62574/mc5em740>

- Montero Ramírez, D. (2024). La investigación cualitativa: definiendo otra gran fuerza de indagación científica. *Rhombus*, 4(1), 77-93. <https://doi.org/10.63058/rhombus.v4i1.169>
- Moreno Oliver, F. J., and Paredes Infanzón, J. (2024). La delincuencia organizada y sus efectos en el medio ambiente. *Justicia Ambiental*, 4(6), 33-78. <https://doi.org/10.35292/justiciaambiental.v4i6.953>
- Nahon da Costa, S., Silva da Silva, D. A., Viana de Freitas, M., and Campelo de Sousa, C. S. (2024). Fatores multivariados associados a ocorrência de crimes ambientais no estado do Amapá-Amazônia-Brasil. *Nativa*, 12(1), 64-72. <https://doi.org/10.31413/nat.v12i1.15601>
- United Nations Office on Drugs and Crime. (2024). *World Wildlife Crime Report 2024: Trafficking in protected species*. https://www.unodc.org/documents/data-and-analysis/wildlife/2024/Wildlife2024_Final.pdf
- Oliveira, T. A. A., and Braga, L. D. (2023). Desastre na bacia do rio Doce: análise do direito fundamental ao meio ambiente ecologicamente equilibrado e a reação dos órgãos públicos responsáveis. *Revista de Gestão e Secretariado*, 14(9), 15577-15583. <https://doi.org/10.7769/gesec.v14i9.2813>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). Declaración PRISMA 2020: una guía actualizada para la publicación de revisiones sistemáticas. *Revista Española de Cardiología*, 74(9), 790-799. <https://doi.org/10.1016/j.recesp.2021.06.016>
- Rojas Vizcarra, L. N. (2025). Límites y alcances de la Fiscalía Especializada en materia ambiental de Puno en su rol de investigación de delitos ambientales. *Justicia Ambiental*, 5(7), 55-72. <https://doi.org/10.35292/justiciaambiental.v5i7.1221>
- Roque, G. A. S. (2024). Da (im)possibilidade de aplicação do princípio da insignificância aos delitos ambientais de acumulação. *Opinião Jurídica*, 23(50), 1-18. <https://doi.org/10.22395/ojum.v23n50a47>
- Ruiz Arias, M. (2021). La víctima del delito ambiental: estudio desde la aporofobia. *Justicia*, 26(40), 98-109. <https://doi.org/10.17081/just.26.40.4891>
- Saad-Diniz, E., and Gianecchini, J. V. (2021). Regulatory rollbacks in the Amazon rainforest: A nuanced look into the effects of environmental victimization. *State Crime Journal*, 10(2), 257-283. <https://doi.org/10.13169/statecrime.10.2.0257>
- Santos, A. P., da Silva, E. R., and de Carvalho, S. R. L. (2021). Evaluation of environmental crimes and intervention strategies of environmental promoting of regional Recôncavo Sul Baiano. *Desenvolvimento e Meio Ambiente*, 56, 183-205. <https://doi.org/10.5380/dma.v56i0.67063>
- de Souza-Lima, J. E., Ricci Salomoni, L., and Gewehr de Oliveira, F. (2024). Markers of Brazilian socio-environmental necropolity. *Veredas do Direito*, 21, e212437. <https://doi.org/10.18623/rvd.v21.2437>
- Tapia Liendo, G. P. (2022). Importancia del informe fundamentado en la persecución de los delitos ambientales. *DERECHO*, 11(11), 80-87. <https://revistas.upt.edu.pe/ojs/index.php/derecho/article/view/695>
- Torres Fernández, R. I., Villada, J. L., and Cau Cattán, M. A. (2021). Inclusión de los delitos ambientales en el Código Penal argentino. *Revista Omnia*, 4(4), 55-77. <https://doi.org/10.53794/ro.v4i4.311>
- Torres Guarnizo, M. A., and Velandia Pardo, E. F. (2022). La interrelación de derechos humanos y medio ambiente desde el concepto de la seguridad humana. *Revista Científica General José María Córdova*, 20(37), 110-128. <https://doi.org/10.21830/19006586.803>
- Vallejos, T., Nahuelhual, L., Gelcich, S., and Oyanedel, R. (2024). Situational crime analysis of poaching within Territorial Use Rights Fisheries (TURFs). *Frontiers in Marine Science*, 11, 1419800. <https://doi.org/10.3389/fmars.2024.1419800>
- Vera Vega, J., and Mayer Lux, L. (2024). El nuevo sistema chileno de delitos ambientales: valoración crítica de su casuismo y del uso de remisiones específicas. *Revista de Derecho Ambiental*, 1(21), 201-230. <https://doi.org/10.5354/0719-4633.2024.73553>
- Vucetich Huaracallo, A. B., Abarca Fernández, R. C. A., Arapa Mendoza, N. Á., Ccori Sulla, B. A., Mamani Apaza, A. P., and Suclla Cuadros, L. M. (2025). Responsabilidad Penal Ambiental y el rol del OEFA en el marco legal peruano. *Justicia Ambiental*, 5(7), 99-136. <https://doi.org/10.35292/justiciaambiental.v5i7.1239>

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