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Effectiveness of Bombana Regional Regulation Implementation in Preventing Livestock-Related Traffic Accid...

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Effectiveness of Bombana Regional Regulation Implementation in Preventing Livestock-Related Traffic Accidents

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Abstract

Traffic accidents caused by livestock roaming on public roads still frequently occur in Bombana Regency despite the enactment of Bombana Regency Regulation Number 4 of 2017 concerning Livestock Control. This study aims to evaluate the effectiveness of the regulation's implementation and identify factors influencing its implementation. The study used a normative-empirical legal method with a statutory, conceptual, and empirical approach. Data were obtained through literature review, field observations, accident documentation, and interviews with the police, Public Order Agency, the Animal Husbandry Service, and the community. The results indicate that the implementation of the regulation has not been effective because livestock still roam on public roads and accidents continue to occur annually. The main obstacles include weak law enforcement, limited resources, poor inter-agency coordination, low public legal awareness, and a culture of informal dispute resolution. This study emphasizes the need for strengthened livestock supervision, consistent law enforcement, and improved institutional coordination to support traffic safety in Bombana Regency.

Keywords: Implementation of Regional Regulation; Livestock Control; Traffic Accidents; Legal Effectiveness; Bombana Regency

INTRODUCTION

Road safety constitutes one of the fundamental indicators of the successful implementation of the rule of law in ensuring legal protection for all road users.

Consequently, the State establishes various legal instruments to promote a traffic system that is safe, orderly, and sustainable, including regulations governing factors that

potentially contribute to traffic accidents.¹ In Indonesia, the legal framework for road safety is principally regulated under Law Number 22 of 2009 concerning Road Traffic and Transportation and, at the local level,² is reinforced through Bombana Regency Regulation Number 4 of 2017 concerning Livestock Control.³ Nevertheless, the existence of statutory regulations alone does not necessarily guarantee their effective implementation.⁴ Traffic accidents involving roaming livestock continue to occur in various regions despite the existence of legal norms governing livestock supervision and control. These circumstances indicate that the principal issue no longer lies in the availability of legal regulations, but rather in the effectiveness of their implementation, supervision, and law enforcement in providing legal certainty and protecting road users from preventable accidents.

Research on the implementation of livestock control policies aimed at preventing traffic accidents has developed considerably over the past five years and may generally be classified into three major strands.⁵ The first study focuses on legal protection for victims of traffic accidents caused by livestock and the legal remedies available to obtain compensation for losses arising from such incidents.⁶ The second study emphasizes the civil liability of livestock owners for losses caused by roaming livestock, particularly through the application of the principle of tort and compensation mechanisms under civil law.⁷ The third strand examines the implementation of regional regulations concerning livestock control by highlighting factors affecting their effectiveness, including institutional coordination, administrative supervision, law enforcement, and public legal awareness.⁸ Although these studies have

¹ World Health Organization, *Global Status Report on Road Safety 2023*, 1st ed (Geneva: Geneva: World Health Organization, 2023).

² "A/RES/68/269 - Improving Global Road Safety | Department of Economic and Social Affairs," United Nations: General Assembly, April 29, 2014, <https://sdgs.un.org/documents/ares68269-improving-global-road-safety-23774>.

³ Kementerian Perhubungan Republik Indonesia, "Statistik Perhubungan Darat Tahun 2023," Jakarta: Jakarta: Kementerian Perhubungan RI., 2023.

⁴ Tony Bliss and Jeanne M. Breen, *Road Safety Management Capacity Reviews and Safe System Projects Guidelines*, Updated Edition (World Bank, Global Road Safety Facility, 2013), 27.

⁵ Baharuddin Baharuddin, Alifa Nailatul Izzah, and Makmur Makmur, "Implementation of Enforcement of Regional Regulations (PERDA) in the Implementation of Public Peace and Order and Community Protection in Sinjai Regency," *PINISI Discretion Review* 5, no. 2 (March 2022): 312, <https://doi.org/10.26858/pdr.v5i2.32140>.

⁶ Muhammad Daniel Fajri et al., "Legal Liability of Livestock Owners for Accidents on Public Roads in Aceh Jaya," *Jurnal Geuthèë: Penelitian Multidisiplin* 8, no. 1 (April 2025): 41, <https://doi.org/10.52626/jg.v8i1.396>.

⁷ Irsan Rahman and Nurazizah, "Penyelesaian Perkara Kerusakan Tanaman Akibat Perbuatan Melawan Hukum Pemilik Ternak Di Kabupaten Bombana Sulawesi Tenggara: Kerusakan Tanaman Akibat Perbuatan Melawan Hukum Pemilik Ternak," *Journal de Facto* 11, no. 1 (July 2024): 38, <https://doi.org/10.36277/jurnaldefacto.v11i1.203>.

⁸ Ardiansah Ardiansah, Lucyane Djaafar, and Sastro M. Wantu, "Cross Institutional Synergy in Regional Livestock Control Implementation: Sinergi Lintas Lembaga Dalam Implementasi Pengendalian Ternak

made significant contributions to the development of livestock control policies and civil liability doctrines, they have devoted only limited attention to evaluating the implementation of Bombana Regency Regulation Number 4 of 2017 as a legal instrument specifically designed to prevent livestock-related traffic accidents. Furthermore, relatively few studies have integrated an assessment of regulatory effectiveness with practical recommendations for strengthening supervision and administrative law enforcement to reduce livestock-related traffic accidents. Based on this research gap, the present study offers a normative-empirical legal analysis that evaluates the effectiveness of the implementation of Bombana Regency Regulation Number 4 of 2017 while simultaneously formulating recommendations to strengthen livestock supervision and law enforcement as a contribution to the development of regional road safety policies.

The urgency of this study becomes more evident when viewed considering the empirical conditions in Bombana Regency. Although the Government of Bombana Regency enacted Regional Regulation Number 4 of 2017 concerning Livestock Control as the legal basis for supervising livestock and preventing animals from

roaming freely on public roads, livestock-related traffic accidents continue to occur every year. According to data obtained from the Traffic Unit of the Bombana Resort Police, five livestock-related traffic accidents were recorded in 2022, seven in 2023, seven in 2024, eight in 2025, and seven cases during the first semester of 2026. Information provided by police officers further indicates that these official statistics do not fully reflect the actual situation because many accidents are resolved through amicable settlement between victims and livestock owners without being formally reported to law enforcement authorities. Consequently, the number of reported cases is substantially lower than the number of accidents that occur in the community. These empirical findings demonstrate that the principal legal issue no longer concerns the existence of Bombana Regency Regulation Number 4 of 2017 as a legal instrument governing livestock control, but rather the extent to which its implementation has effectively achieved its intended objective of preventing livestock-related traffic accidents. Although the Regional Regulation explicitly stipulates obligations for livestock owners, prohibits livestock from roaming on public roads, regulates livestock control mechanisms, and provides administrative sanctions for violations, field observations show that

Daerah,” *Indonesian Journal of Innovation Studies* 27, no. 2 (February 2026): 8, <https://doi.org/10.21070/ijins.v27i2.1869>.

supervision has not been implemented consistently and administrative sanctions have not been implemented effectively. This situation reflects a clear discrepancy between *das sollen*, namely the legal standards prescribed by statutory regulations, and *das sein*, namely the realities of law enforcement and policy implementation in practice.⁹ Therefore, it is necessary to evaluate the effectiveness of the implementation of Bombana Regency Regulation Number 4 of 2017, identify the factors contributing to its ineffective enforcement, and formulate strategies to strengthen livestock supervision and administrative law enforcement in order to reduce livestock-related traffic accidents.

This study employs a normative-empirical legal research method, in which normative legal analysis is integrated with empirical examination of the implementation of legal norms in practice.¹⁰ The normative approach is applied to examine statutory regulations governing livestock control, road traffic, and civil liability, while the empirical approach is used to evaluate the implementation of Bombana Regency

Regulation Number 4 of 2017 through an analysis of livestock-related traffic accident data, field observations, and interviews with officers of the Traffic Unit of the Bombana Resort Police, the Civil Service Police Unit, the Livestock Office, and members of the local community.¹¹ By integrating normative legal analysis with empirical findings, this study provides a comprehensive assessment of the consistency between the legal framework governing livestock control and its implementation in practice.¹² This integrated approach also enables the identification of legal, institutional, and social factors influencing the effectiveness of the Regulation and forms the basis for proposing strategies to strengthen livestock supervision and law enforcement in preventing livestock-related traffic accidents.¹³

This study aims to evaluate the implementation of Bombana Regency Regulation Number 4 of 2017 concerning Livestock Control as a legal instrument for preventing livestock-related traffic accidents in Bombana Regency. It further examines the legal, institutional, and social factors that

⁹ Soerjono Soekanto, *Faktor-Faktor Yang Mempengaruhi Penegakan Hukum* (Jakarta: Raja Grafindo Persada, 2008), 4.

¹⁰ Tunggal Ansari Setia Negara, "Normative Legal Research in Indonesia: Its Originis and Approaches," *Audito Comparative Law Journal (ACLJ)* 4, no. 1 (2023): 4, <https://doi.org/10.22219/aclj.v4i1.24855>.

¹¹ Retno Widyani et al., "Empirical Legal Research Methods: Applications in Legal Research in Indonesia," *Rechtsnormen: Journal of Law* 3, no. 4 (2025): 189, <https://research.adra.ac.id/index.php/rjl/article/view/2095/1508>.

¹² Tasrizal, "Rekonstruksi Epistemologis Metodologi Penelitian Hukum: Integrasi Pendekatan Normatif dan Empiris," *Jurisprudensi: Jurnal Ilmu Hukum* 2, no. 1 (2025): 95, <https://doi.org/10.70193/jurisprudensi.v2i01.05>.

¹³ Kurdi Kurdi, Armansyah Armansyah, and Teuku Ahmad Dadek, "The Effectiveness of Administrative Sanctions as an Alternative to Criminal Law Enforcement in the Environmental Sector," *JlHK* 7, no. 2 (2026): 1003, <https://doi.org/10.46924/jlHK.v7i2.365>.

contribute to the ineffective implementation of the Regulation and analyzes their implications for road safety and legal protection. Based on the findings of the normative and empirical analyses, this study formulates recommendations to strengthen livestock supervision, improve administrative law enforcement, and enhance inter-agency coordination to increase the effectiveness of preventing livestock-related traffic accidents. Ultimately, this study is expected to contribute to the development of evidence-based regional policies on livestock control while enriching the discourse on the effectiveness of local government regulations within Indonesian administrative and transportation law.

Unlike previous studies, which have predominantly examined either the civil liability of livestock owners or the general implementation of regional livestock control policies, this study integrates normative legal analysis with empirical evidence to provide a comprehensive evaluation of the implementation of Bombana Regency Regulation Number 4 of 2017 in preventing livestock-related traffic accidents. By examining the consistency between the Regulation and its practical enforcement, this study identifies the legal, institutional, and social factors affecting its effectiveness and proposes evidence-based strategies to strengthen livestock supervision and administrative law enforcement.

Accordingly, the findings are expected not only to enrich the academic discourse on the effectiveness of regional regulations within Indonesian administrative and transportation law but also to provide practical recommendations for local governments in developing more effective policies to improve road safety and prevent livestock-related traffic accidents.

RESULT AND DISCUSSION

Implementation of Bombana Regency Regulation Number 4 of 2017 on Livestock Control in Preventing Livestock-Related Traffic Accidents

Bombana Regency Regional Regulation Number 4 of 2017 concerning Livestock Control was established as a regional legal instrument to maintain public order, protect public facilities, and ensure traffic safety through the regulation of livestock supervision and control. This Regional Regulation establishes the legal obligation for livestock owners to pen and supervise their livestock, prohibits livestock from roaming on public roads, and authorizes the Civil Service Police Unit to take enforcement action against any violations. These provisions demonstrate that the Regional Regulation not only regulates the governance of livestock control but also functions as a preventative legal instrument aimed at reducing traffic accidents caused by livestock through administrative supervision and law enforcement.

From the perspective of legal implementation, the effectiveness of a regulation cannot be measured solely by the existence of legal norms but must also be assessed based on how those norms are applied in practice.¹⁴ As argued by Soerjono Soekanto, the implementation of legal norms depends upon the interaction between legal substance, law enforcement institutions, supporting facilities, community legal awareness, and legal culture.¹⁵

Consequently, evaluating the implementation of Bombana Regency Regulation Number 4 of 2017 requires an assessment of the specific obligations established by the Regulation and the parties responsible for fulfilling and enforcing them. The primary obligation rests with livestock owners, who are required to supervise and confine their livestock and prevent them from roaming on public roads, while relevant government institutions are responsible for supervision, control, and enforcement. From the perspective of legal substance, these provisions can be examined syntactically, semantically, and pragmatically. Syntactically, the Regulation establishes the subjects responsible for livestock control and the corresponding obligations; semantically, it clearly regulates the prohibition of livestock

roaming on public roads and provides mechanisms for enforcement and administrative sanctions; while pragmatically, the effectiveness of these provisions depends on their implementation in practice.

Field observations and interviews indicate that livestock continue to roam freely on public roads, and that supervision and administrative sanctions have not been implemented consistently. Therefore, although the substantive provisions of the Regulation provide a legal basis for livestock control, their effectiveness remains dependent on the compliance of livestock owners and the consistency of institutional supervision and enforcement.¹⁶

The findings of this research indicate that the Government of Bombana Regency has undertaken several measures to implement the Regional Regulation. According to interviews conducted with officers of the Civil Service Police Unit, enforcement activities have been carried out through periodic livestock control operations, public awareness campaigns, and coordination with the Livestock Office and the Bombana Resort Police. Livestock found roaming on public roads are secured and temporarily detained before being returned to

¹⁴ Soekanto, *Faktor-Faktor Yang Mempengaruhi Penegakan Hukum*, 5.

¹⁵ Marthen Arie, "An Approach of Legisprudence Theory to Assess the Quality of Local Regulation," *Hasanuddin Law Review* 2, no. 3 (December 2016): 371, <https://doi.org/10.20956/halrev.v2i3.699>.

¹⁶ Ni Luh Gede Astariyani et al., "Preventive and Evaluative Mechanism Analysis on Regulatory and Legislation Reform in Indonesia," *LAW REFORM* 19, no. 2 (2023): 253, <https://doi.org/10.14710/lr.v19i2.55819>.

their owners after the completion of administrative procedures. In addition, the local government has conducted various outreach activities to encourage livestock owners to build proper pens and discourage their livestock from grazing freely along public roads.

Despite these efforts, field observations indicate that livestock still roam freely along several main roads in Bombana Regency, particularly on the route connecting Poleang District with West Poleang District, including in Timbala Village. Cows and buffaloes are often seen grazing around, even on, the road without adequate supervision from their owners. This situation poses a high risk to road users, especially at night when visibility is very limited.¹⁷ Such empirical findings demonstrate that the implementation of the Regional Regulation has not yet achieved its intended preventive objectives because livestock owners have not consistently complied with their obligations to confine, supervise, and prevent their livestock from roaming on public roads.¹⁸

The implementation gap is also reflected in the role of livestock owners as the primary subjects responsible for complying with the Regional Regulation. Interviews

conducted with livestock owners indicate that many of them are aware of the existence of Bombana Regency Regulation Number 4 of 2017 and understand the prohibition against allowing livestock to roam freely on public roads. However, economic considerations and long-established husbandry practices continue to influence their behaviour. Many owners prefer extensive grazing systems because they reduce feeding costs and eliminate the need to construct permanent livestock enclosures. Consequently, compliance with statutory obligations is often subordinated to practical and economic considerations.¹⁹

The implementation of the Regional Regulation is further influenced by institutional coordination among relevant government agencies.²⁰ Interviews with representatives from the Public Order Agency, the Animal Husbandry Agency, and the Bombana Police Resort indicated that inter-agency coordination has generally been successful in following up on reports submitted by the public. However, routine monitoring activities have not been consistently implemented because each agency has different duties, operational priorities, and resource constraints. As a

¹⁷ International Transport Forum, *Road Safety Annual Report 2024*, (Paris, France), 2024, 24.

¹⁸ Annie Myranika et al., "Effectiveness of Law in the Policy of Restricting the Operation of Goods Vehicles," *Istinbath: Jurnal Hukum* 22, no. 02 (2025): 332, <https://doi.org/10.32332/istinbath.v22i02.art04>.

¹⁹ Muhamad Nur Afandi et al., "Collaborative Governance in a Mandated Setting: Shifting Collaboration in Stunting Interventions at Local Level," *Development Studies Research* 10, no. 1 (December 2023): 1, <https://doi.org/10.1080/21665095.2023.2212868>.

²⁰ International Transport Forum, *Road Safety Annual Report 2024*.

result, livestock control operations are generally only carried out after receiving complaints from the public or when roaming livestock disrupt public activities or cause traffic accidents. This reactive approach undermines the preventive function that should be realized through the implementation of Regional Regulations.²¹

Bombana Regency Regional Regulation No. 4 of 2017 stipulates administrative sanctions for livestock owners who fail to comply with their obligations concerning livestock control.²² Bombana These sanctions should be imposed through the administrative enforcement mechanisms provided by the Regional Regulation, particularly against owners who allow their livestock to roam on public roads, while taking into account the circumstances and recurrence of violations. The imposition of administrative sanctions under the Regional Regulation does not replace or diminish the legal consequences provided under Law Number 22 of 2009 concerning Road Traffic

and Transportation, because the two instruments regulate different legal aspects. The Regional Regulation primarily functions as a preventive and administrative instrument for controlling livestock at the local level,²³ whereas the national legislation provides the broader legal framework for road traffic safety and transportation.²⁴

The administrative sanctions under the Regional Regulation should be understood as complementary too, rather than conflicting with or nullifying, the sanctions and legal consequences provided under national traffic law.²⁵ However, empirical findings indicate that these sanctions are rarely applied consistently. However, empirical findings indicate that the administrative sanctions stipulated in the Regional Regulation are rarely applied consistently, which weakens their deterrent effect and contributes to repeated violations by livestock owners.²⁶

The implementation of the Regional Regulation must also be viewed in relation to broader legal obligations to ensure public

²¹ OECD OECD, "Government at a Glance 2023," *Government at a Glance 2023* (June 2023): 35, <https://doi.org/10.1787/3d5c5d31-en>.

²² Bagus Anwar Hidayatullo and Murdoko Murdoko, "The Role of Regional Regulations in Optimizing Public Order, Public Order, and Community Protection," *TATOHI: Jurnal Ilmu Hukum* 5, no. 10 (December 2025): 477, <https://doi.org/10.47268/tatohi.v5i10.3542>.

²³ Roni Afrizal and Arliansyah, "Implementasi Peraturan Daerah Nomor 4 Tahun 2025 Tentang Hewan Ternak Kabupaten Kaur," *Jurnal Stia Bengkulu: Committe to Administration for Education Quality* 12, no. 2 (July 2026): 245, <https://jurnal.stiabengkulu.ac.id/index.php/jsb/article/view/362>.

²⁴ Ismail Koto et al., "Perlindungan Hukum Atas Kekayaan Intelektual Perspektif Hukum Islam," *Jurnal Yuridis* 10, no. 2 (December 2023): 67, <https://doi.org/10.35586/jyur.v10i2.7142>.

²⁵ Widayanti, Kusworini, and Widiati Dwi Winarni, "Sanksi Administratif Atas Pelanggaran Izin Bangunan: Studi Kritis Hukum Administrasi Negara," *Jurnal Kolaboratif Sains* 8, no. 9 (September 2025): 6065, <https://jurnal.unismuhpalu.ac.id/index.php/JKS/article/view/7988>.

²⁶ Hilda Swandani Prastiti, "Menakar Efektivitas Pendekatan Penataan (Compliance Approach) Dan Pendekatan Penjeraan (Deterrence Approach) Dalam Penegakan Hukum Lingkungan," *Tanjungpura Law Journal* 6, no. 1 (2022): 11, <https://doi.org/10.26418/tlj.v6i1.45403>.

safety.²⁷ Article 229 Law No. 22 of 2009 on Road Traffic and Transportation emphasizes that the management of road traffic and transportation must be oriented toward ensuring security, safety, order, and smooth flow for all road users. Every party involved including the government, road and transportation operators, drivers, and the public as road users has a role and responsibility in ensuring traffic safety.²⁸ These efforts are carried out through the enforcement of traffic regulations, ensuring vehicles meet roadworthiness requirements, providing adequate road facilities and infrastructure, as well as monitoring and enforcing the law against traffic violations. With the involvement and compliance of all these parties, the risk of traffic accidents can be minimized, thereby better ensuring the safety and protection of road users. Similarly, Article 1368 of the Civil Code stipulates that livestock owners can be held civilly liable for losses arising from damage or accidents caused by animals under their ownership or supervision.²⁹ Therefore, Bombana Regency Regional Regulation Number 4 of 2017

serves as an important preventive instrument in complementing national legal regulations by establishing practical mechanisms for monitoring and controlling livestock before accidents occur. Thus, the Regional Regulation functions not only as an administrative instrument but also becomes an integral part of Indonesia's national legal framework in providing protection for public safety.³⁰

Based on this description, this study concludes that Bombana Regency Regional Regulation Number 4 of 2017 provides an adequate legal framework for regulating livestock monitoring and control. However, its implementation does not fully reflect the intended objectives of the Regional Regulation.³¹ Although government agencies have implemented livestock control operations, community outreach, and inter-agency coordination, these efforts have not been implemented consistently or comprehensively.

The continued presence of livestock roaming on public roads indicates that the level of legal compliance among livestock

²⁷ M. Zulfa Aulia, "Hukum Progresif Dari Satjipto Rahardjo: Riwayat, Urgensi, dan Relevansi," *Undang: Jurnal Hukum* 1, no. 1 (2018): 166, <https://doi.org/10.22437/ujh.1.1.159-185>.

²⁸ Abdul Wahab Harun, Dian Ekawaty Ismail, and Jufriyanto Puluhalawa, "Penegakan Hukum Terhadap Penyelenggara Jalan Rusak Yang Mengakibatkan Kecelakaan Lalu Lintas," *Hakim: Jurnal Ilmu Hukum dan Sosial* 2, no. 1 (2024): 140, <https://doi.org/10.51903/hakim.v2i1.1541>.

²⁹ Sahrul et al., "Pertanggungjawaban Pemilik Hewan Ternak Terhadap Kerusakan Pertanian Berdasarkan Pasal 1368 KUHPerdata : (Studi Di Desa Maronge Kecamatan Maronge Kabupaten Sumbawa)," *Unizar Law Review* 8, no. 1 (June 2025): 127, <https://doi.org/10.36679/ulr.v8i1.94>.

³⁰ Muhammad Erfa Redhani and Ahmad Fikri Hadin, "Efficiency of The Regional Legislation Process: A Study of Simplification of Supervision of Regional Regulation Formation by Central Government," *Journal of Constitutional and Governance Studies* 1, no. 1 (June 2024): 16, <https://doi.org/10.20885/JCGS.vol1.iss1.art1>.

³¹ Hidayatulloh and Murdoko, "The Role of Regional Regulations in Optimizing Public Order, Public Order, and Community Protection," 481.

owners remains relatively low. The sanctions provided under Bombana Regency Regional Regulation No. 4 of 2017 are administrative in nature because they are imposed as legal consequences for violations of obligations relating to livestock control and are intended to ensure compliance with the Regulation rather than to constitute criminal punishment. In this context, the relevant sanctions function as administrative enforcement measures against livestock owners who fail to comply with their obligations to control and confine their livestock. Their preventive function is to encourage compliance and deter repeated violations, while their repressive function is to respond to violations that have already occurred. However, empirical findings indicate that the implementation of these administrative sanctions has not been consistent, thereby weakening their deterrent effect and contributing to the continued occurrence of livestock roaming on public roads.³²

Effectiveness of the Implementation of Bombana Regency Regulation Number 4 of 2017 in Preventing Livestock-Related Traffic Accidents

The effectiveness of a legal regulation is determined not merely by the existence of legal norms but by the extent to which those norms are implemented and achieve the objectives for which they were enacted.³³ In the context of Bombana Regency Regulation Number 4 of 2017 concerning Livestock Control, effectiveness should be assessed based on whether the Regulation has succeeded in reducing livestock roaming on public roads and preventing traffic accidents.³⁴ This evaluation is particularly important because the Regulation was enacted as a preventive legal instrument intended to create public order while simultaneously ensuring the safety of road users through effective livestock supervision.³⁵

The empirical findings of this study indicate that Bombana Regency Regulation Number 4 of 2017 has not yet been fully effective in achieving these objectives.³⁶ Although the Regulation has been implemented for several years, livestock-related traffic accidents continue to occur annually in Bombana Regency. Data obtained from the Traffic Law Enforcement Unit of the Bombana Resort Police show that five

³² Jamil Jamil et al., "Redesigning the Concept of Law Enforcement in Administrative Violations of General Elections in Indonesia," *Yuridika* 39, no. 3 (2024): 286, <https://doi.org/10.20473/ydk.v39i3.48338>.

³³ Arie, "An Approach of Legisprudence Theory to Assess the Quality of Local Regulation," 375.

³⁴ Redhani and Hadin, "Efficiency of The Regional Legislation Process," June 2024, 7.

³⁵ World Health Organization, *Global Status Report on Road Safety 2023*.

³⁶ Ardiansah Ardiansah, Lucyane Djaafar, and Sastro M. Wantu, "Cross Institutional Synergy in Regional Livestock Control Implementation: Sinergi Lintas Lembaga Dalam Implementasi Pengendalian Ternak Daerah," *Indonesian Journal of Innovation Studies* 27, no. 2 (February 2026): 10, <https://doi.org/10.21070/ijins.v27i2.1869>.

livestock-related traffic accidents were officially recorded in 2022, seven cases in 2023, seven cases in 2024, eight cases in 2025, and seven cases during the first semester of 2026. These figures demonstrate that the number of accidents has not shown a significant downward trend despite the existence of a specific regional regulation governing livestock control.³⁷

However, the official accident statistics should not be interpreted as representing the actual number of livestock-related traffic accidents occurring in Bombana Regency. Interviews conducted with officers of the Bombana Resort Police revealed that many accidents are resolved directly between livestock owners and victims through family deliberations (*musyawarah kekeluargaan*) without being formally reported to the police. In practice, compensation is frequently agreed upon at the scene of the accident, and neither party proceeds with formal legal nor administrative processes. Consequently, official police records only represent reported cases and therefore cannot accurately depict the extent of traffic accidents caused by livestock in the area.

Field observations conducted during this research further strengthen these

findings. Livestock, particularly cattle and buffalo, are often found roaming freely along several public roads connecting Poleang and West Poleang Districts, including in Timbala Village. In many cases, livestock are left to graze unsupervised in locations directly adjacent to heavily trafficked roads. These conditions significantly increase the risk of traffic accidents, particularly at night when visibility is limited.³⁸ The results of these observations indicate that the preventive objectives of the Regional Regulation have not been optimally achieved, considering that the presence of livestock roaming freely is still a real threat to the safety of road users.³⁹

The effectiveness of Bombana Regency Regional Regulation Number 4 of 2017 can be analyzed comprehensively using the theory of legal effectiveness put forward by Soerjono Soekanto, which explains that the success of law implementation is influenced by five interrelated factors, namely legal substance, law enforcement officers, supporting facilities and infrastructure, public legal awareness, and legal culture.⁴⁰ This theoretical framework serves as a relevant analytical basis for identifying factors that cause Regional Regulations not to be implemented optimally, even though they

³⁷ Jamil Jamil et al., "Redesigning the Concept of Law Enforcement in Administrative Violations of General Elections in Indonesia," *Yuridika* 39, no. 3 (2024): 298, <https://doi.org/10.20473/ydk.v39i3.48338>.

³⁸ K. Parkavi et al., "Enhancing Road Safety: Detection of Animals on Highways During Night," *IEEE Access* 13 (2025): 36879, <https://doi.org/10.1109/ACCESS.2025.3545490>.

³⁹ Rizqi, "Meaningful Participation in Local Regulation Making in Indonesia."

⁴⁰ Ardiansah, Djaafar, and Wantu, "Cross Institutional Synergy in Regional Livestock Control Implementation," February 2026, 13.

have regulated clear legal norms regarding the supervision and control of livestock.⁴¹

The first factor that influences the effectiveness of the law is the substance of the law. The results of this study indicate that Bombana Regency Regional Regulation Number 4 of 2017 contains provisions addressing several key aspects of livestock control, including the obligations of livestock owners to supervise and confine their livestock, the prohibition of livestock roaming on public roads, mechanisms for government supervision and control, and administrative consequences for violations.⁴² These provisions provide a legal basis for preventing livestock-related disturbances to road safety. The Regional Regulation clearly stipulates the obligations of livestock owners to supervise and confine their livestock, prohibits livestock from roaming on public roads, authorizes government agencies to enforce livestock regulations, and establishes administrative sanctions for any violations.⁴³ Therefore, from a normative perspective, the legal substance in the Regional Regulation is sufficient to support efforts to prevent traffic accidents caused by livestock. Therefore, the continued occurrence of traffic accidents

involving livestock cannot be attributed to weaknesses in the legal norms stipulated in the Regional Regulation, but rather to various obstacles in its implementation.

The second factor relates to the implementation and enforcement of the Regulation. Interviews with the Public Order Agency (Satpol PP), the Bombana Police Resort, and the Animal Husbandry Department indicate that these agencies have undertaken various measures to implement the Regulation, including regular livestock control operations, community outreach, and coordination among relevant agencies. These measures should be distinguished according to their legal function: livestock control operations constitute an enforcement-oriented measure when they involve identifying and responding to violations, while community outreach and inter-agency coordination primarily constitute preventive and supporting measures aimed at promoting compliance. Therefore, not all institutional activities can be categorized as law enforcement in the strict sense; rather, they collectively represent efforts to implement, prevent violations of, and enforce the Regulation.⁴⁴

⁴¹ Tanti Kirana Utami et al., "Analysis of the Implementation of Good Governance Principles in the Formation of Laws and Regulations in Indonesia," *Indonesian Journal of Law and Justice* 2, no. 2 (2024): 6, <https://doi.org/10.47134/ijlj.v2i2.3421>.

⁴² Ardiansah, Djaafar, and Wantu, "Cross Institutional Synergy in Regional Livestock Control Implementation," February 2026, 13.

⁴³ Ardiansah, Djaafar, and Wantu, 14.

⁴⁴ Muhammad Erfa Redhani and Ahmad Fikri Hadin, "Efficiency of The Regional Legislation Process: A Study of Simplification of Supervision of Regional Regulation Formation by Central Government," *Journal of Constitutional and Governance Studies*, June 13, 2024, 15, <https://doi.org/10.20885/JCGS.vol1.iss1.art1>.

The third factor relates to supporting facilities and infrastructure. Effective livestock monitoring and control requires adequate operational vehicles, temporary housing facilities for controlled livestock, adequate budgetary support, and adequate equipment to support law enforcement activities. Empirical findings indicate that these supporting facilities and infrastructure are still limited in Bombana Regency. Interviews with Public Order Agency officers revealed that limited operational facilities often hamper routine surveillance in areas where livestock frequently roam. Consequently, law enforcement cannot be implemented consistently across all sub-districts, reducing the effectiveness of Regional Regulations in preventing violations and traffic accidents involving livestock.

The fourth factor is public legal awareness. Research shows that many livestock owners understand that allowing their livestock to roam freely on public roads violates regional regulations and potentially endangers the safety of road users. However, awareness of this legal obligation is not always followed by compliance. Economic considerations remain the primary reason for maintaining free-range grazing practices, as the construction of permanent enclosures is relatively expensive. Consequently, many livestock owners prioritize economic

efficiency over fulfilling statutory obligations, thereby reducing the overall effectiveness of the Regional Regulation.

The fifth factor relates to legal culture. One of the most significant findings of this study is the continued strength of informal dispute resolution practices through family deliberation compared to formal legal mechanisms. While this practice reflects local values that emphasize social harmony and conflict avoidance, its dominance over formal legal mechanisms indicates a gap between the regulatory framework and the legal culture of the community. This finding suggests that the sociological basis of Bombana Regency Regional Regulation Number 4 of 2017 has not yet been fully realized in practice, as the norms established by the Regulation have not been sufficiently internalized and incorporated into the community's existing patterns of behaviour and dispute resolution. Consequently, the effectiveness of the Regulation is constrained not only by the enforcement of its provisions but also by the extent to which its legal norms are accepted and reflected in the behaviour of the community.

Traffic accidents involving livestock are often resolved through amicable agreements without reporting to the police, imposing administrative sanctions,⁴⁵ or resolving through civil mechanisms. As a

⁴⁵ Jasmiadi, Agustin Hanafi, and Nahara Eriyanti, "Penegakan Hukum Terhadap Pelanggaran Pelepasan Hewan Ternak Di Aceh Barat," *As-Siyadah* 6, no. 1 (March 2026): 60, <https://doi.org/10.22373/as-siyadah.v6i1.8300>.

result, repeated violations often occur without significant legal consequences, reducing legal certainty and weakening the preventive and deterrent functions intended by Regional Regulations.⁴⁶

The results of this study are generally in line with research conducted by Fajri et al., which concluded that weak law enforcement and low public legal awareness significantly reduce the effectiveness of implementing regulations regarding livestock control in Aceh Jaya District.⁴⁷ Supervision of livestock owners and inconsistent implementation of regional regulations remain the main causes of recurring traffic accidents involving livestock in various regions in Indonesia.⁴⁸ However, unlike previous studies, this study specifically evaluates the implementation of Bombana Regency Regional Regulation No. 4 of 2017 by integrating empirical traffic accident data, field observations, and interviews with various relevant agencies. This approach allows for a more comprehensive understanding of the institutional, social, and cultural factors that influence the effectiveness of livestock supervision and control policies in the region.

Based on the overall results of the analysis, this study concludes that Bombana Regency Regional Regulation Number 4 of 2017 has not been implemented effectively in efforts to prevent traffic accidents involving livestock. Although the Regional Regulation has provided an adequate legal framework, the effectiveness of its implementation is still hampered by inconsistent law enforcement, limited operational resources, low public legal awareness, and a legal culture that prioritizes informal dispute resolution over formal legal mechanisms.⁴⁹ Therefore, strengthening inter-agency coordination, consistent application of administrative sanctions, increasing support for facilities, infrastructure, and operational resources, and providing legal education to the community on an ongoing basis are very important steps to increase the effectiveness of livestock supervision and control while simultaneously realizing better traffic safety in Bombana Regency.⁵⁰

CONCLUSION

This study shows that the implementation of Bombana Regency Regional Regulation Number 4 of 2017

⁴⁶ Lies Sulistiani and Efa Fakhriah, "The Effect of Extra Judicial Settlement in Criminal Cases Based on the Principle of *Ultimum Remedium*," *Padjadjaran Jurnal Ilmu Hukum (Journal of Law)* 10, no. 3 (February 2025): 310, <https://doi.org/https://doi.org/10.22304/pjih.v10n3.a1>.

⁴⁷ Fajri et al., "Legal Liability of Livestock Owners for Accidents on Public Roads in Aceh Jaya," 40.

⁴⁸ Marianus Dewalking, David Meyners, and Rafael R. Tupen, "Implementasi Peraturan Desa Komba Nomor 1 Tahun 2017 Tentang Penertiban Pemeliharaan Dan Kepemilikan Ternak Di Desa Komba Kecamatan Kota Komba Kabupaten Manggarai Timur," *Petitum Law Journal* 2, no. 1 (November 2024): 193, <https://doi.org/10.35508/pelana.v2i1.17413>.

⁴⁹ Redhani and Hadin, "Efficiency of The Regional Legislation Process," June 13, 2024, 17.

⁵⁰ Ardiansah, Djaafar, and Wantu, "Cross Institutional Synergy in Regional Livestock Control Implementation," February 2026, 7.

concerning the Supervision and Control of Livestock has not been effective in preventing traffic accidents caused by livestock. Although the Regional Regulation comprehensively regulates livestock monitoring, livestock owner obligations, enforcement mechanisms, and administrative sanctions, its implementation in the field has not been optimal. Research shows that livestock are still frequently found roaming on public roads, and traffic accidents involving livestock continue to occur year after year. These findings indicate that the objectives of the Regional Regulation have not been fully realized in practice, resulting in a gap between the applicable legal provisions and their implementation in the field.

The results of this study indicate that the effectiveness of Regional Regulations is influenced by various interrelated factors. These factors include inconsistent law enforcement, limited operational resources and supporting facilities, suboptimal inter-agency coordination, low public legal awareness, and a legal culture that still prioritizes dispute resolution through deliberation rather than formal legal mechanisms. These conditions collectively result in the expected preventive function of Regional Regulations not being able to function optimally, thus efforts to ensure traffic safety and provide legal protection for road users have not been effectively implemented.

This research contributes to the development of legal science through a normative-empirical evaluation of the implementation of Bombana Regency Regional Regulation Number 4 of 2017. The results of the research show that the effectiveness of livestock monitoring, and control policies is not only determined by the substance of the regulations, but is also influenced by institutional factors and socio-legal conditions that develop in society. It is hoped that these findings can enrich studies regarding the implementation of regional regulations as well as provide a basis for consideration in formulating more effective policies to improve the governance of law enforcement and traffic safety, especially in areas that face similar problems due to the presence of livestock on public roads.

SUGGESTIONS

The Bombana Regency Government needs to improve the effectiveness of the implementation of Bombana Regency Regulation Number 4 of 2017 through routine and continuous livestock monitoring and control. These efforts need to be supported by adequate budget allocation, improvements to operational facilities and infrastructure, and strengthened coordination between the Public Order Agency, the Animal Husbandry Service, the Bombana Police Resort, sub-district governments, and village governments. Furthermore, ongoing legal education and outreach activities for the

community need to be implemented to enhance livestock owners' understanding of their legal obligations and the importance of responsible livestock management as part of efforts to achieve traffic safety.

Law enforcement officials need to more consistently enforce the provisions of Bombana Regency Regional Regulation No. 4 of 2017, especially against livestock owners who repeatedly violate the law. Firm and consistent application of administrative sanctions is expected to strengthen legal certainty, encourage increased public compliance with applicable regulations, and create a deterrent effect for violators. Thus, the implementation of the Regional Regulation is expected to be more effective in reducing the number of traffic accidents caused by livestock in Bombana Regency.

Further research is expected to develop a comparative study of the implementation of regulations on livestock supervision and control in various regions in Indonesia. Furthermore, research should examine various policy alternatives that have the potential to improve the effectiveness of livestock supervision, as well as analyze the relationship between institutional capacity, public legal awareness, and the successful implementation of regional regulations. The results of this research are expected to inform the formulation of more effective regional policies to prevent livestock-related traffic

accidents and improve road user safety in various regions.

Bibliography

- Afandi, Muhamad Nur, Endah Tri Anomsari, Alikha Novira, and Sri Sudartini. "Collaborative Governance in a Mandated Setting: Shifting Collaboration in Stunting Interventions at Local Level." *Development Studies Research* 10, no. 1 (December 2023): 1–12. <https://doi.org/10.1080/21665095.2023.2212868>.
- Afrizal, Roni, and Arliansyah. "Implementasi Peraturan Daerah Nomor 4 Tahun 2025 Tentang Hewan Ternak Kabupaten Kaur." *Jurnal Stia Bengkulu : Committe to Administration for Education Quality* 12, no. 2 (July 2026): 241–50. <https://jurnal.stiabengkulu.ac.id/index.php/jsb/article/view/362>.
- Ardiansah, Ardiansah, Lucyane Djaafar, and Sastro M. Wantu. "Cross Institutional Synergy in Regional Livestock Control Implementation: Sinergi Lintas Lembaga Dalam Implementasi Pengendalian Ternak Daerah." *Indonesian Journal of Innovation Studies* 27, no. 2 (February 2026): <https://doi.org/10.21070/ijins.v27i2.1869>.
- "A/RES/68/269 - Improving Global Road Safety | Department of Economic and Social Affairs." United Nations: General Assembly, April 29, 2014. <https://sdgs.un.org/documents/ares68269-improving-global-road-safety-23774>.
- Arie, Marthen. "An Approach of Legisprudence Theory to Assess the Quality of Local Regulation." *Hasanuddin Law Review* 2, no. 3 (December 2016): 371–84. <https://doi.org/10.20956/halrev.v2i3.699>.
- Astariyani, Ni Luh Gede, Bagus Hermanto, Rosino da Cruz, and Fifiana Wisnaeni. "Preventive and Evaluative Mechanism

- Analysis on Regulatory and Legislation Reform in Indonesia.” *LAW REFORM* 19, no. 2 (December 2023): 248–69. <https://doi.org/10.14710/lr.v19i2.55819>.
- Aulia, M. Zulfa. “Hukum Progresif Dari Satjipto Rahardjo: Riwayat, Urgensi, dan Relevansi.” *Undang: Jurnal Hukum* 1, no. 1 (June 2018): 159–85. <https://doi.org/10.22437/ujh.1.1.159-185>.
- Baharuddin, Baharuddin, Alifa Nailatul Izzah, and Makmur Makmur. “Implementation of Enforcement of Regional Regulations (PERDA) in the Implementation of Public Peace and Order and Community Protection in Sinjai Regency.” *PINISI Discretion Review* 5, no. 2 (March 2022): 309–18. <https://doi.org/10.26858/pdr.v5i2.32140>.
- Dewalking, Marianus, David Meyners, and Rafael R. Tupen. “Implementasi Peraturan Desa Komba Nomor 1 Tahun 2017 Tentang Penertiban Pemeliharaan dan Kepemilikan Ternak Di Desa Komba Kecamatan Kota Komba Kabupaten Manggarai Timur.” *Petitum Law Journal* 2, no. 1 (November 2024): 192–209. <https://doi.org/10.35508/pelana.v2i1.17413>.
- Fajri, Muhammad Daniel, Anhar Nasution, Putra Aguswandi, and Wiratmadinata Wiratmadinata. “Legal Liability of Livestock Owners for Accidents on Public Roads in Aceh Jaya.” *Jurnal Geuthèë: Penelitian Multidisiplin* 8, no. 1 (April 2025): 38–44. <https://doi.org/10.52626/jg.v8i1.396>.
- Harun, Abdul Wahab, Dian Ekawaty Ismail, and Jufriyanto Puluhulawa. “Penegakan Hukum Terhadap Penyelenggara Jalan Rusak Yang Mengakibatkan Kecelakaan Lalu Lintas.” *Hakim: Jurnal Ilmu Hukum Dan Sosial* 2, no. 1 (2024): 133–56. <https://doi.org/10.51903/hakim.v2i1.1541>.
- Hidayatulloh, Bagus Anwar, and Murdoko Murdoko. “The Role of Regional Regulations in Optimizing Public Order, Public Order, and Community Protection.” *TATOHI: Jurnal Ilmu Hukum* 5, no. 10 (December 2025): 475–83. <https://doi.org/10.47268/tatohi.v5i10.3542>.
- International Transport Forum. *Road Safety Annual Report 2024*. (Paris, France), 2024, 82 halaman.
- Jamil, Jamil, Moh Fadli, Shinta Hadiyantina, and Ngesti Dwi Prasetyo. “Redesigning the Concept of Law Enforcement in Administrative Violations of General Elections in Indonesia.” *Yuridika* 39, no. 3 (September 2024): 279–302. <https://doi.org/10.20473/ydk.v39i3.48338>.
- Jasmiadi, Agustin Hanafi, and Nahara Eriyanti. “Penegakan Hukum Terhadap Pelanggaran Pelepasan Hewan Ternak Di Aceh Barat.” *As-Siyadah* 6, no. 1 (March 2026): 58–75. <https://doi.org/10.22373/as-siyadah.v6i1.8300>.
- Kementerian Perhubungan Republik Indonesia. “Statistik Perhubungan Darat Tahun 2023.” Jakarta: Jakarta: Kementerian Perhubungan RI., 2023.
- Koto, Ismail, Ida Hanifah, Surya Perdana, Tarmizi, and Ida Nadirah. “Perlindungan Hukum Atas Kekayaan Intelektual Perspektif Hukum Islam.” *Jurnal Yuridis* 10, no. 2 (December 2023): 66–73. <https://doi.org/10.35586/jjur.v10i2.7142>.
- Kurdi, Kurdi, Armansyah Armansyah, and Teuku Ahmad Dadek. “The Effectiveness of Administrative Sanctions as an Alternative to Criminal Law Enforcement in the Environmental Sector.” *JiHK* 7, no. 2 (2026): 999–1012. <https://doi.org/10.46924/jihk.v7i2.365>.
- Myranika, Annie, Dian Yulviani, Siti Humulhaer, and Dwi Nur Afrianto. “Effectiveness of Law in the Policy of

- Restricting the Operation of Goods Vehicles.” *Istinbath: Jurnal Hukum* 22, no. 02 (December 2025): 309–31. <https://doi.org/10.32332/istinbath.v22i02.art04>.
- Negara, Tunggul Ansari Setia. “Normative Legal Research in Indonesia: Its Originis and Approaches.” *Audito Comparative Law Journal (ACLJ)* 4, no. 1 (February 2023): 1–9. <https://doi.org/10.22219/aclj.v4i1.24855>.
- OECD, OECD. “Government at a Glance 2023.” *Government at a Glance 2023* (June 2023). <https://doi.org/10.1787/3d5c5d31-en>.
- Parkavi, K., Agniv Ganguly, Shivansh Sharma, Ashesh Banerjee, and Keshav Kejriwal. “Enhancing Road Safety: Detection of Animals on Highways During Night.” *IEEE Access* 13 (2025): 36877–96. <https://doi.org/10.1109/ACCESS.2025.3545490>.
- Prastiti, Hilda Swandani. “Menakar Efektivitas Pendekatan Penaatan (Compliance Approach) dan Pendekatan Penjeraan (Deterrence Approach) Dalam Penegakan Hukum Lingkungan,” *TANJUNGPURA LAW JOURNAL* 6, no. 1 (January 2022): 1–13. <https://doi.org/10.26418/tlj.v6i1.45403>.
- Rahman, Irsan, and Nurazizah. “Penyelesaian Perkara Kerusakan Tanaman Akibat Perbuatan Melawan Hukum Pemilik Ternak Di Kabupaten Bombana Sulawesi Tenggara: Kerusakan Tanaman Akibat Perbuatan Melawan Hukum Pemilik Ternak.” *Journal de Facto* 11, no. 1 (July 2024): 27–49. <https://doi.org/10.36277/jurnaldefacto.v11i1.203>.
- Redhani, Muhammad Erfa, and Ahmad Fikri Hadin. “Efficiency of The Regional Legislation Process: A Study of Simplification of Supervision of Regional Regulation Formation by Central Government.” *Journal of Constitutional and Governance Studies* 1, no. 1 (June 2024): 1–19. <https://doi.org/10.20885/JCGS.vol1.iss1.art1>.
- Rizqi, Alda Rifada. “Meaningful Participation in Local Regulation Making in Indonesia: A Study of Legislative Law: Meaningful Participation Pada Pembuatan Peraturan Daerah Di Indonesia: Sebuah Kajian Hukum Perundang-Undangan.” *Rechtsidee* 10, no. 2 (December 2022): 112. <https://doi.org/10.21070/jihr.v11i0.801>.
- Sahrul, Fahrurrozi, Intan Aurel, Fitriani Amalia, Imawanto, Usman Munir, Gede Tusan Ardika, Aesthetica Fiorini Mantika, and Edi Yanto. “Pertanggungjawaban Pemilik Hewan Ternak Terhadap Kerusakan Pertanian Berdasarkan Pasal 1368 KUHPerdara: (Studi Di Desa Maronge Kecamatan Maronge Kabupaten Sumbawa).” *Unizar Law Review* 8, no. 1 (June 2025): 126–33. <https://doi.org/10.36679/ulr.v8i1.94>.
- Soekanto, Soerjono. *Faktor-Faktor Yang Mempengaruhi Penegakan Hukum*. Jakarta: Raja Grafindo Persada, 2008.
- Sulistiani, Lies, and Efa Fakhriah. “The Effect of Extra Judicial Settlement in Criminal Cases Based on the Principle of Ultimum Remedium.” *Padjadjaran Jurnal Ilmu Hukum (Journal of Law)* 10, no. 3 (February 2025): 300–320. <https://doi.org/https://doi.org/10.22304/pjih.v10n3.a1>.
- Tasrizal. “Rekonstruksi Epistemologis Metodologi Penelitian Hukum: Integrasi Pendekatan Normatif dan Empiris.” *Jurisprudensi: Jurnal Ilmu Hukum* 2, no. 1 (June 2025): 86–98. <https://doi.org/10.70193/jurisprudensi.v2i01.05>.
- Tony Bliss and Jeanne M. Breen. *Road Safety Management Capacity Reviews and Safe System Projects Guidelines*. Updated Edition. Washington, DC,

- United States: World Bank, Global Road Safety Facility, 2013.
- Utami, Tanti Kirana, Nazwa St May, Siti Nurajijah, Helmi Al Zaidan, Farrel Meika Putra Hendrawan, and M. Algi Fahril. "Analysis of the Implementation of Good Governance Principles in the Formation of Laws and Regulations in Indonesia." *Indonesian Journal of Law and Justice* 2, no. 2 (December 2024): 1-11.
<https://doi.org/10.47134/ijlj.v2i2.3421>.
- Widayanti, Kusworini, and Widiati Dwi Winarni. "Sanksi Administratif Atas Pelanggaran Izin Bangunan: Studi Kritis Hukum Administrasi Negara." *Jurnal Kolaboratif Sains* 8, no. 9 (September 2025): 6064-72, <https://jurnal.unismuhpalu.ac.id/index.php/JKS/article/view/7988>.
- Widyani, Retno, Li Wei, and Wang Jun. "Empirical Legal Research Methods: Applications in Legal Research in Indonesia." *Rechtsnormen: Journal of Law* 3, no. 4 (August 2025): 135-145, <https://research.adra.ac.id/index.php/rjl/article/view/2095/1508>.
- World Health Organization. *Global Status Report on Road Safety 2023*. 1st ed. Geneva: Geneva: World Health Organization, 2023.