

COLLABORATIVE MODEL BETWEEN GOVERNMENT AND LAW ENFORCEMENT COMBATING ILLEGAL GOLD MINING IN NORTH SUMATRA

Silvina Sari Siregar¹, Cici Sundari¹, and Wenny Dastina¹

¹Government Science Study Program, Sultan Thaha Saifuddin State Islamic University, Jambi.
E-mail: silvinasiregar56@sma.belajar.id; cicisundari@uinjambi.ac.id; wennydastina@uinjambi.ac.id

ABSTRACT

This study aims to analyze in depth the collaborative governance model between local governments and law enforcement officials in controlling illegal gold mining in North Sumatra Province. The research uses a qualitative, descriptive-analytical approach based on secondary data from policy documents, regulations, and media reports. The analysis is carried out through a thematic approach, identifying patterns of interaction among actors, coordination mechanisms, the distribution of authority, and decision-making processes in collaborative practices. The analysis technique uses NVivo 12 Plus, a qualitative document analysis tool, on a computer. Their equipment is easy to use and can process words and explore word speed, attributes, and big data case scenarios. The results show that collaboration has occurred through a multi-actor approach, but it remains administrative and has not been systematically institutionalized. The main limitations lie in overlapping authority, weak coordination across sectors, and the absence of a sustainable, formal collaborative forum. In addition, the approach used remains predominantly repressive and has not addressed prevention grounded in community empowerment. This study concludes that the existing collaboration model has not reached the integrative collaborative stage. Therefore, it is necessary to strengthen institutional design, clarify the roles of actors, and establish a structured coordination mechanism to increase the effectiveness of illegal mining control.

Keywords: collaborative governance; illegal gold mining; intergovernmental coordination; law enforcement collaboration; institutional design

MODEL KOLABORATIF PEMERINTAH DAN PENEGAK HUKUM DALAM PENANGGULANGAN TAMBANG EMAS ILEGAL SUMATERA UTARA

ABSTRAK

Penelitian ini bertujuan untuk menganalisis secara mendalam model tata kelola kolaboratif antara pemerintah daerah dan aparat penegak hukum dalam pengendalian penambangan emas ilegal di Provinsi Sumatera Utara. Penelitian menggunakan pendekatan kualitatif dengan tipe deskriptif-analitis berdasarkan data sekunder yang diperoleh dari dokumen kebijakan, regulasi, dan laporan media. Analisis dilakukan melalui pendekatan tematik dengan mengidentifikasi pola interaksi antar aktor, mekanisme koordinasi, distribusi kewenangan, dan proses pengambilan keputusan dalam praktik kolaboratif. Teknik analisis menggunakan aplikasi pengolah data NVivo 12 plus, alat analisis dokumen kualitatif, dengan bantuan komputer. Peralatan mereka mudah digunakan dan dapat memproses kata-kata dan mengeksplorasi kecepatan kata, atribut, dan skenario kasus data besar. Hasil penelitian menunjukkan bahwa kolaborasi telah terjadi melalui pendekatan multi-aktor, namun masih bersifat administratif dan belum dilembagakan secara sistematis. Keterbatasan utama terletak pada tumpang tindih otoritas, lemahnya koordinasi antarsektor, dan tidak adanya forum kolaboratif formal yang berkelanjutan. Selain itu, pendekatan yang digunakan masih didominasi represif dan belum menyinggung aspek pencegahan berbasis pemberdayaan masyarakat. Penelitian ini menyimpulkan bahwa model kolaborasi yang ada belum mencapai tahap kolaboratif integratif. Oleh karena itu, perlu diperkuat desain kelembagaan, kejelasan peran aktor, dan mekanisme koordinasi yang terstruktur untuk meningkatkan efektivitas pengendalian penambangan liar.

Kata kunci: tata kelola kolaboratif; penambangan emas ilegal; koordinasi antar pemerintah; kolaborasi penegakan hukum; desain kelembagaan

INTRODUCTION

Economic growth and rising community needs drive various forms of natural resource exploitation, including mining. The community will make various efforts and methods, including mining activities. Mining is a series of activities related to the exploration, extraction (drilling), processing, use, and sale of mineral materials (minerals, coal, geo-

thermal, gold, oil, and gas) (Asaf, 2020). Gold mining activities carried out in river areas can damage natural ecosystems. If not managed properly, mining can cause environmental damage, including water, soil, and air pollution (Kurniawan & Dharma, 2025). The large number of mining activities actually causes problems for the environment in the region because most of the mining carried out does not have a permit based on the Regulation of

the Minister of Energy and Mineral Resources of the Republic of Indonesia No. 26 of 2018 concerning the Implementation of Good Mining Rules and Supervision of Mineral and Coal Mining (In some cases, there are allegations of the involvement of parties with power or interests in illegal mining practices, which makes law enforcement efforts even more difficult. Given the complexity of this issue, it is important to conduct a more in-depth scientific study of the extent of the role of local governments in preventing and addressing illegal gold mining (Bastiana Darongke et al., 2022).

Mining business activities carried out without a permit may be subject to criminal penalties as stipulated in the criminal provisions of Article 158 of the Law of the Republic of Indonesia Number 4 of 2009 concerning Mineral and Coal Mining, which states that: "Every person who conducts mining

without a Mining Business Permit, People's Mining Permit, Special Mining Business Permit as referred to in Article 37, Article 40 paragraph (3), Article 48, Article 67 paragraph (1), Article 74 paragraph (1) or paragraph (5) shall be sentenced to a maximum of 10 (ten) years in prison and a maximum fine of Rp. 10,000,000,000.00 (ten billion rupiah) (Tongkotow et al., 2023).

Unlicensed gold mining (PETI) is a mineral (gold) mining business carried out by an individual, a group of people, or a company with a legal entity that does not have a license from a central or regional government agency in accordance with applicable laws and regulations (Christian et al., 2025). The phenomenon of unlicensed gold mining (PETI) is found in various parts of Indonesia, including North Sumatra, specifically in the Mandailing Natal district (Kholijah & Santoso, 2022).

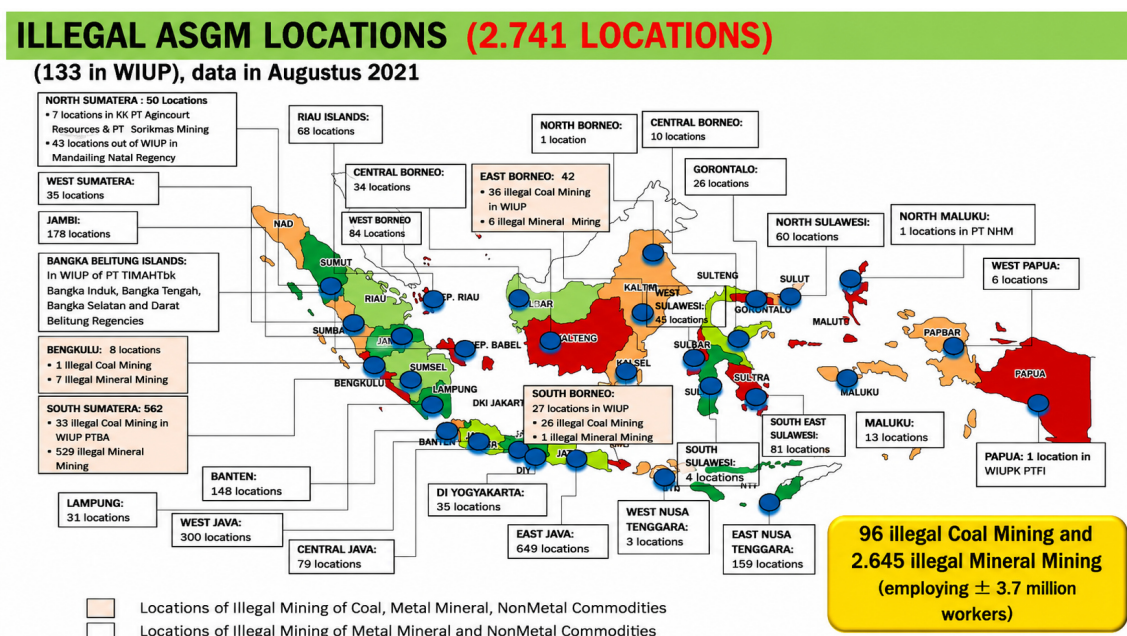


Figure 1. Map of illegal gold mining locations in Indonesia

Source: Ministry of Energy and Mineral Resources of the Republic of Indonesia

Figure 1 illustrates the distribution of artisanal and small-scale illegal mining (ASGM/PETI) locations in Indonesia, totaling 2,741 as of August 2021, based on data from the Indonesian Ministry of Energy and Mineral Resources (ESDM). Of these locations, about 2,645 are classified as illegal mineral mining sites, while 96 are illegal coal mining operations. The map shows that ASGM activities are not only a local problem but have also proliferated across almost all provinces in Indonesia, including North Sumatra (Utami, 2025). This widespread distribution suggests that illegal mining is a

structural problem closely linked to economic disparities, weak regulatory enforcement, and limited monitoring capacity at the national and regional levels. In addition to illustrating the magnitude of ASGM activities, this map also highlights several provinces with very high concentrations, such as South Sumatra, East Java, Kalimantan, and Sulawesi, which are priority areas for monitoring and policy intervention. From a governance perspective, this visualization underscores the urgency of adopting an integrated, multi-actor collaborative approach, given the significant environmental

degradation, occupational safety risks, and potential social conflicts associated with illegal mining practices across Indonesia (Pribadi, 2022).

North Sumatra Province is a region in Indonesia with abundant natural resources, including petroleum, gas, mining materials, and plantations. Informal or illegal mining is currently one of the threats to various circles, including local and central governments and communities directly affected by these activities, as it destroys the environment. Mandailing Natal Regency is one of the areas with a high gold content, so there are many illegal miners there (Prayuda et al., 2025). Unlicensed gold mining activities (PETI) have mushroomed in several sub-districts, such as Huta Bargout, Naga Juang, Kotanopan, Muara Sipongi, Pakantan, Ulu Pungkut, Batang Natal, Lingga Bayu, Ranto Baek, Batahan, Natal, and Muara Batang Gadis. This practice not only harms the state financially by depriving it of tax and levy revenue, but also causes severe environmental damage and threatens the safety of the surrounding community (Sandi, 2018).

In addressing the complexity of illegal gold mining in North Sumatra Province, collaboration between local government and law enforcement officials is needed. Collaborative Multi-Actor Approach. This is considered more relevant for addressing illegal gold mines because it can provide quick responses, involve multiple sectors, and be flexible in handling complex, urgent issues (Basri et al., 2024). Meanwhile, Collaborative Governance still has an important role as a long-term normative and strategic framework. However, it is not attractive enough as a straightforward solution at the policy implementation level. According to Ansell and Gash (2008), multi-actor collaboration is part of collaborative governance, in which decision-making occurs through direct interaction between state and non-state actors in a joint forum to reach consensus on complex public issues. This collaboration is necessary when problems cannot be solved by a single actor alone, as in the case of illegal mining involving communities, officials, and governments (Collins et al., 2021).

Previous research that has discussed the same theme about the collaboration of local governments and law enforcement officials in controlling illegal gold mines is a study from (Panjaitan & As'ari, 2025) with the title of a collaboration model between the Southeast Sulawesi Police and the Kendari City Regional Government in the development of security and crime prevention in the Kendari City area. This study analyzes collaboration between the South Sulawesi Police and the

Kendari City Government, using relevant collaborations as a basis for building collaboration between local governments and law enforcement officials in different contexts. The second study, conducted by, describes the activities of miners who lack permits and become permanent workers. If caught, the only thing that will be criminally prosecuted is a worker without arresting the owner of capital or support who is always free from legal snares. The complexity of the PETI problem is not without a way out (case study in Siraisan Village, Ulu Barumun District, Padang Lawas Regency). and the latest research with the title Collaboration between the Police and Regional Governments in Handling Illegal Gold Mining in Mandailing Natal Regency, highlighting the cooperation between the Regional Government and the Mandailing Natal Police in overcoming illegal mining activities. This research is important as a starting point for developing a more integrated collaboration model, especially in collaborative governance, to formulate policies and implement illegal mining control programs synergistically and sustainably. Case Study of Mandailing Natal Regency, North Sumatra Province (Sahrul & Daulay, 2025).

Based on the literature review, studies on collaborative governance between local governments and law enforcement agencies in addressing illegal gold mining remain limited and tend to be sectoral and repressive. The repressive approach in this context refers to handling that prioritizes direct law enforcement actions such as raids, arrests, and dismantling of mining sites without being balanced by prevention strategies, community empowerment, or resolution of structural root causes such as poverty and limited economic access (Rusmiyati et al., 2026). In the context of governance, this approach is top-down in nature and tends to overlook inclusive multi-stakeholder engagement. The repressive approach refers to actions that exercise control through power and coercion, typically placing greater emphasis on enforcement rather than prevention or guidance. In practice, repressive policies often restrict public freedoms and can create injustice by failing to address the root causes of problems. Therefore, repressive approaches are frequently criticized and considered less effective at providing long-term solutions to problems (Hajer, 2020).

This study focuses on the collaborative governance model in addressing illegal gold mining in North Sumatra Province by analyzing actor interaction patterns, coordination mechanisms, authority distribution, and decision-making processes within the collaborative governance framework. This

study aims to provide a more comprehensive understanding of collaboration dynamics and to identify structural weaknesses in existing governance practices. Methodologically, this study utilizes NVivo 12 Plus to support systematic qualitative data analysis, producing findings that are more in-depth and structured, both theoretically and practically.

METHOD

This study uses a qualitative approach with a descriptive-analytical design. The main focus of the research is to explain how the mechanism of collaboration among actors operates in the practice of PETI control policies. The data used is secondary data sourced from policy documents, laws and regulations, and online media reports. In this study, Media data is not presented as a single fact but rather as a representation of policy discourse and publicly made empirical practices. Therefore, this research can be categorized as Policy Discourse

Analysis—collection techniques. The data were obtained using the Ncapture feature in NVivo 12 Plus, a web browser extension that captures web content from websites, social media, and other documents, such as scientific articles. The NVivo 12 plus analysis uses the cross-tab query analysis feature. This feature shows the percentage of news data that is manually encoded using the N Vivo 12 plus feature (Sundari et al., 2022). However, the software is used only instrumentally, while the analysis remains focused on conceptual interpretation. Data analysis is carried out through several stages, namely: (1) data encoding, (2) theme categorization, and (3) analytical interpretation. The analysis focuses on the four main dimensions of collaborative governance: actor interaction patterns, coordination mechanisms, authority distribution, and decision-making processes. This approach allows research not only to describe phenomena but also to explain the mechanisms underlying the formation of existing collaboration patterns.

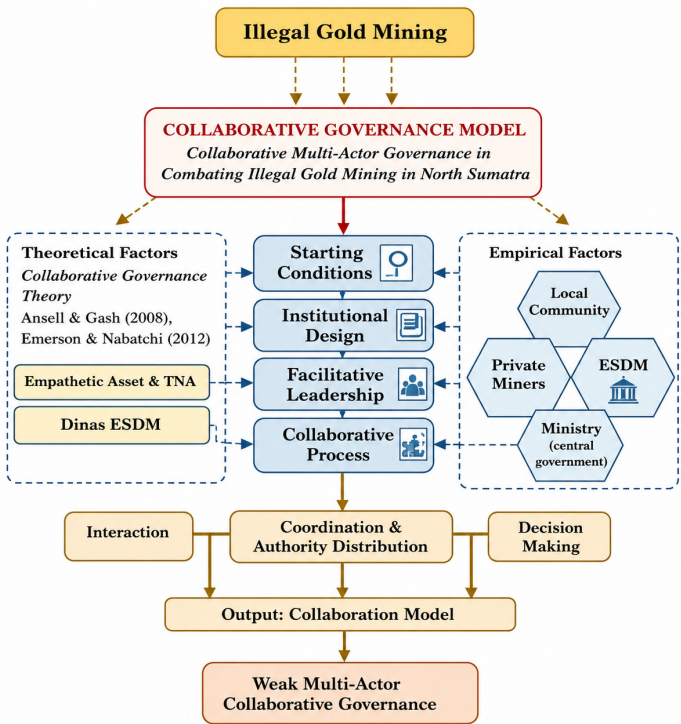


Figure 2. Research Framework

Source: Developed by the researchers using NVivo 12 Plus

RESULTS AND DISCUSSION

Starting Conditions

The phenomenon of unlicensed gold mining (PETI) in Mandailing Natal Regency reflects the

unbalanced starting conditions as described in the collaborative governance framework. The community's economic constraints, limited access to formal employment, and heavy reliance on natural resources encourage community involvement in illegal mining. In this context, socio-economic condi-

tions are not only the background but also a form of resistance to the policy of control. Economic dependence on PETI creates a policy dilemma in which law enforcement efforts may conflict with local communities' economic needs (Sahrul & Daulay, 2025). This indicates that the inequality of power and resources between actors is an initial ob-

stacle to the collaboration process. In addition, weak supervision and limited institutional capacity of local governments strengthen the sustainability of PETI practices. This condition shows that the starting conditions in this case are characterized by low trust, resource inequality, and conflicts of interest between actors (Harahap et al., 2021).

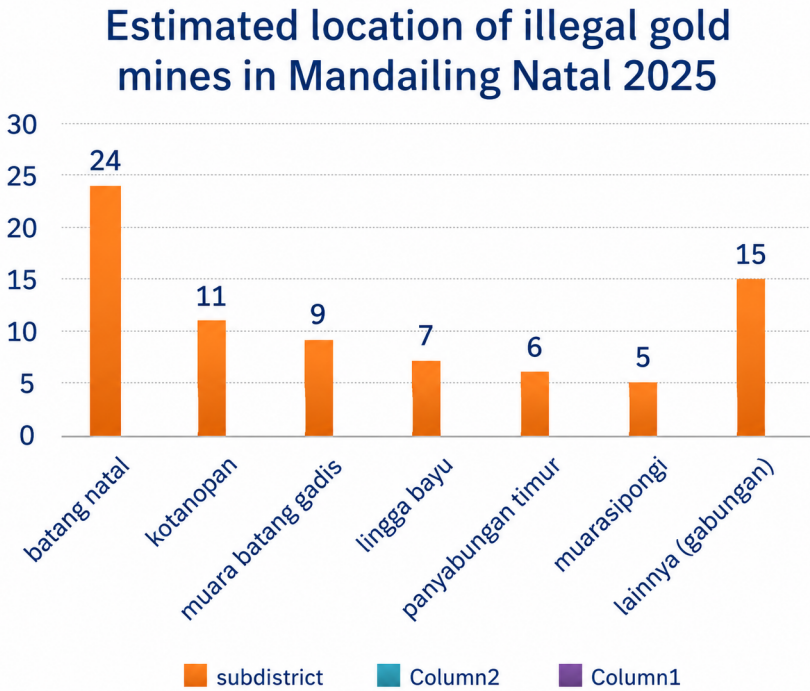


Figure 3. Estimated location of illegal gold mines in Mandailing Natal Regency in 2025
Source: Processed by the researchers based on secondary data (2025)

Figure 3 shows that Batang Natal District is the main center of illegal gold mining in the Mandailing Natal Regency, with an estimated 24 locations. This figure represents nearly one-third of the total number of illegal mining in the area, reflecting two important factors: weak control and oversight by authorities, and the high economic benefits that encourage unlicensed mining practices. Kotanopan and Muara Batang Gadis sub-districts also show relatively high levels of activity, although still below Batang Natal. Meanwhile, the "Other (Combined)" category shows that illegal mining locations are still distributed across various other sub-districts at lower intensity. However, it still adds to the burden of supervision. This distribution pattern shows that the problem of illegal gold mining in Mandailing Natal is decentralized and complex (Ciptadi, 2025).

Regulatory Governance Analysis

From a governance perspective, the control of PETI cannot be separated from the regulatory structure that governs the distribution of authority. Law-Law Number 3 of 2020 concerning Minerals and Coal (Mineral and Mineral Law), Placing the main authority of mining management on the central government. Meanwhile, local governments have a limited role in supervision and facilitation. On the other hand, Law Number 6 of 2023 concerning Job Creation introduces a risk-based licensing scheme that aims to simplify the business licensing process, including in the mining sector (Saputri & Prayuda, 2026). However, in its implementation, this policy has not been fully adhered to, as the coordination mechanism between levels of government has not been strengthened. The misalignment between central and regional authorities creates a governance gap, leading to weak control at the local level

(Samudera, 2025). Local governments do not have full authority to enforce them, while law enforcement officials tend to operate sectorally, with limited policy integration. Thus, the problem of PETI is not only operational but also structural, requiring the reconstruction of policy design and the alignment of authority across levels of government.

1. Institutional Design

The results of the study show that the institutional design of collaboration is still weak and has not been institutionalized. Collaboration between actors tends to be carried out through an ad hoc mechanism without the support of a permanent forum, standard operating procedures (SOPs), or clear accountability mechanisms. Within the framework of Ansell and Gash (2008), these weaknesses reflect the non-fulfillment of the principles of institutional design, especially in the aspects of rule clarity, inclusivity of participation, and transparency of processes. The absence of a formal collaborative forum leads to reactive and unsustain-

able coordination. This condition also shows that collaboration has not been supported by adequate institutional capacity, making it difficult to produce effective policy outputs (Chania & Hidayat, 2024).

2. Facilitative Leadership

The role of leadership in encouraging collaboration among actors remains suboptimal. Local government has not fully fulfilled its role as a facilitative leader, which can build trust, mediate conflicts, and unite the interests of various parties. The existing leadership remains administrative and has not been able to foster a joint commitment. As a result, interactions among actors tend to be sectoral rather than integrated. In the context of collaborative governance, facilitative leadership is a key factor in building trust and ensuring the sustainability of collaborative processes. The absence of this role is one of the main causes of weak collaboration (Dan et al., 2024).

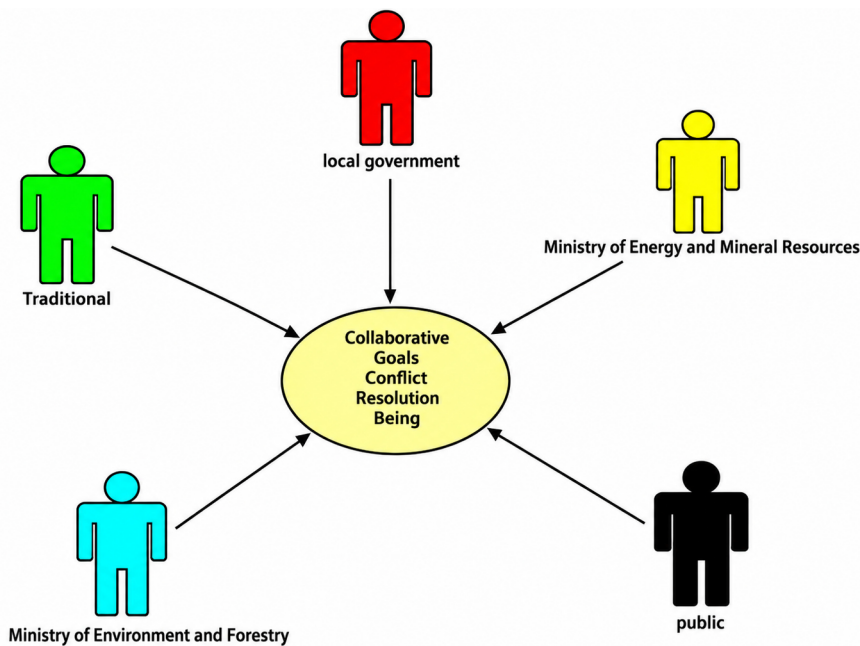


Figure 4. Multi-Actor Collaboration Scheme in Control of Illegal Gold Mines

Source: Modified with Nvivo 12 Plus

3. Collaborative Process

Figure 4 shows a collaboration scheme between local governments, the Ministry of Environment and Forestry (KLHK), the Energy and Mineral Resources Service (ESDM), the TNI/Polri (Polri), and the community in controlling illegal gold mines in Mandailing Natal, North Sumatra, reflecting a

multi-actor approach to natural resource governance. Local governments are the main coordinators in formulating regional policies and strategies, in line with regional autonomy authorities. The Ministry of Environment and Forestry is tasked with environmental conservation and rehabilitation of affected lands. The Energy and Mineral Resources Agency identifies community mining areas

and issues permits to ensure that mining activities comply with the law. In the context of security, the TNI/Polri has a vital role in ordering illegal activities and maintaining stability in conflict-prone areas. Meanwhile, the community is empowered, educated, and engaged in community-based surveillance systems, so that they are not only policy objects but also important actors in controlling illegal mining (Nugraha, 2025).

This cooperation is carried out through the establishment of an integrated forum across institutions that allows for policy synergy and field action in a sustainable manner. In the forum, each actor has a specific role and portion, coordinated through a joint action plan that includes illegal mining control operations, socialization of environmental impacts, and facilitation of professional transfers for illegal miners. This strategy is expected to create a more humane, solution-oriented approach, not just a repressive one. This kind of cross-sectoral collaboration is an important prerequisite for addressing the complexity of illegal gold mining, which not only causes environmental damage but also has the potential to spark social conflict and regional economic losses (Mungkasa, 2022).

The collaborative process in controlling PETI in North Sumatra is still in its early stages and has not developed optimally. Interactions between actors do not reflect the ideal stages of collaborative governance, such as face-to-face dialogue, trust-building, commitment to the process, and shared understanding. Decision-making is still dominated by a top-down approach, with largely symbolic community involvement. This shows that the collaborative process has not been carried out in an inclusive and participatory manner. Thus, the collaboration that occurs is more appropriately categorized as administrative coordination rather than substantive collaboration capable of producing a joint solution (Zein et al., 2023).

Based on the results of the comprehensive analysis, this study identifies that the governance model for controlling illegal gold mining in North Sumatra Province can be classified as multi-actor-based collaborative governance, which remains in the weak multi-actor collaborative governance category. This classification is based on empirical findings showing the involvement of various stakeholders, but has not been accompanied by adequate quality in the collaboration process. Conceptually, the approach applied has reflected the characteristics of multi-actors, characterized by the participation of a number of parties, including local governments, law enforcement officials, relevant technical agencies, and communities directly affected by ille-

gal mining activities. The involvement of these actors demonstrates recognition that the problem of illegal gold mining is a complex issue that cannot be solved sectorally by a single institution. Therefore, normatively, a collaborative approach is a strategic choice in the governance of this issue (Nugroho & Sari, 2023).

However, the study's findings show that the strengthening of structured, systematic, and institutionalized collaboration mechanisms has not followed such multi-actor involvement. The collaboration that occurs remains administrative and procedural and has not developed into a joint work system based on clear, sustainable rules, norms, and operational mechanisms. In other words, the presence of many actors has not automatically led to effective collaboration. The weakness of this model is increasingly evident in the coordination pattern between actors, which remains incidental and reactive (Sofyan & Priyanto, 2025). Coordination is generally carried out in response to specific situations, such as increased illegal mining activity or public pressure, rather than as part of a planned routine mechanism. In addition, there is no institutional framework that specifically regulates and facilitates cross-sectoral and cross-actor collaboration. The absence of a permanent collaborative forum, cross-agency standard operating procedures (SOPs), and a clear division of roles results in interactions between actors tending to run partially and sectorally (Hamzani et al., 2025).

Furthermore, the dominant approach to controlling illegal gold mining remains oriented towards repressive law enforcement. Law enforcement officials are more focused on control, arrest, and enforcement operations against perpetrators, without being balanced with comprehensive preventive and participatory strategies. As a result, the efforts made tend to be short-term and have not been able to address the root of the problem, such as economic, social, and institutional factors that encourage people to engage in illegal mining.

In the context of participation, the community, which should be a key actor in collaborative governance, remains relatively passive. The role of the community is limited to providing information or serving as field informants, not as subjects actively involved in the policy formulation and decision-making process. This condition shows that the principle of participation, one of the main pillars of collaborative governance, has not been implemented substantively but remains symbolic.

On the other hand, the weak integration of policies across sectors and across levels of government has also worsened the effectiveness of existing col-

laborations. Policies produced by each actor tend to run independently without adequate synchronization, resulting in overlap and gaps in implementation in the field. This shows that the dimensions of vertical and horizontal coordination in collaborative governance have not been running optimally.

In terms of operational mechanisms, the pattern of collaboration still shows linear, hierarchical work characteristics. Local governments identify areas prone to illegal mining; law enforcement officials implement control measures; technical agencies provide data and information support; and the community serves as a source of field information. This pattern indicates that the relationship between actors has not developed into a dialogical and deliberative interaction, but is still limited to the division of administrative tasks.

These conditions indicate that the collaboration process has not reached the ideal stage outlined in the framework of collaborative governance by Ansell and Gash (2008), which emphasizes the importance of face-to-face dialogue, trust building, and shared commitment as the foundation of effective collaboration. The absence of intensive, direct dialogue among actors, low levels of trust, and the lack of strong mutual commitment indicate that existing collaboration is still in the early stages of development. Thus, although the governance model applied has reflected a multi-actor approach, the process and quality of interaction still do not meet the basic principles of effective collaborative governance. Therefore, the existing model is more appropriately categorized as weak multi-actor collaborative governance, which requires strengthening institutional aspects, coordination mechanisms,



Figure 5. Multi-Actor Collaboration Scheme in Control of Illegal Gold Mines

Source: Modified with Nvivo 12 Plus

stakeholder participation, and policy integration to produce more effective, inclusive, and sustainable governance.

Figure 5 shows the results of a word cloud generated in NVivo 12 Plus, which represents the empirical construction of a collaborative governance model between local governments and law enforcement officials to counter illegal gold mining in North Sumatra Province. The dominance of key-

words such as mining, policy, government, law, and environment indicates that the phenomenon of illegal mining cannot be understood sectorally but rather as a complex, cross-sectoral, and multidimensional public governance issue. Conceptually, these findings reinforce the collaborative governance framework put forward by Ansell and Gash (2008), which emphasizes that collaboration's effectiveness is largely determined by starting con-

ditions, institutional design, facilitative leadership, and collaborative process. In the context of this study, the word cloud visualization indicates that the dimension of starting conditions remains characterized by socio-economic inequality, high public reliance on PETI activities, and low levels of trust among actors. This condition creates structural barriers to building equal and inclusive collaboration (Rusmiyati et al., 2026b).

Furthermore, when analyzed through the integrative framework for collaborative governance, these findings also reveal weaknesses in the system context and collaborative dynamics. In the context of the system, the emergence of issues of law violations, land conflicts, and maladministration reflects external pressure stemming from weak regulatory enforcement and the insynchronization of policies across levels of government (Saputri & Prayuda, 2026). Meanwhile, in terms of collaborative dynamics, the low intensity of interaction, limited dialogue among actors, and the lack of shared motivation indicate that the collaborative process has not developed optimally. The themes in the word cloud also show the high complexity of violations, ranging from mining-related criminal violations and licensing administration violations to horizontal social conflicts. This emphasizes that the problem of illegal mining is not only a legal-formal issue but also reflects the failure of governance to integrate the legal, social, and environmental dimensions simultaneously. In this context, weak coordination and fragmented authority among actors reinforce the governance gap, as explained by Emerson and, with implications for the low effectiveness of policy interventions at the local level (Zein et al., 2023). In addition, the prominence of maladministration and weak supervision in the visualization results indicates that institutional capacity remains a fundamental problem. The local government and law enforcement officials have not been able to perform their control functions effectively, both in prevention and repression. As a result, illegal mining practices continue to be massive and repeated, which has an impact on environmental damage, declining government legitimacy, and loss of regional revenue potential. Overall, the integration between the visual word cloud analysis and the thematic findings indicates that the applied collaborative governance model remains in the weak multi-actor category. The identified multi-actor involvement has not been accompanied by a substantive quality of collaborative interaction, but remains limited to reactive, sectoral administrative coordination. This indicates that key elements of collaborative governance, such as face-to-face dialogue, trust-building,

and shared commitment, have not been realized (Nugroho & Sari, 2023). Therefore, governance transformation efforts are needed that not only focus on strengthening law enforcement aspects, but also on developing inclusive institutional designs, strengthening facilitative leadership, and developing adaptive and sustainable collaboration mechanisms. In this case, a collaborative approach should focus on cross-sectoral policy integration, increasing community participation as a key actor, and strengthening institutional capacity to create more effective, responsive, and equitable mining governance.

CONCLUSION

This study confirms that the governance model for countering illegal gold mining in Mandailing Natal Regency, North Sumatra, falls into the weak multi-actor collaborative governance category. Despite the involvement of various local government actors, law enforcement officials, technical agencies, and the community, the quality of the collaboration remains low. It fails to meet the basic principles of collaborative governance outlined by Ansell and Gash (2008). The main weakness lies in regulatory governance and the distribution of authority, where the applicable legal framework (the Mineral and Mineral Law and the Job Creation Law) tends to concentrate authority in the central government. In contrast, local governments have limited enforcement capacity. This condition creates a governance gap that affects suboptimal vertical and horizontal coordination among actors. At the implementation level, the collaboration mechanism has not been supported by clear operational instruments, such as cross-sectoral SOPs, permanent collaboration forums, and mechanisms for cross-authority recommendations, resulting in coordination that tends to be ad hoc and reactive. In terms of process, the collaboration that took place had not reached the substantive stage, characterized by a lack of face-to-face dialogue, weak trust-building, and a lack of shared commitment. Community participation remains symbolic and has not been integrated into the decision-making process. In addition, the dominance of the repressive approach shows that the control strategy has not touched the root of socio-economic problems, especially the community's dependence on PETI activities as a source of livelihood. The main contribution of this research lies in affirming that the presence of multiple actors does not automatically result in effective collaboration without institutional design, clarity of authority, and structured

coordination mechanisms. Thus, this study enriches the study of collaborative governance by showing the importance of integrating aspects of regulation, institutions, and social dynamics in the context of illegal natural resource management. However, this study has limitations, especially in the use of secondary data that has not fully captured the dynamics of direct interaction of actors in the field, and has not examined in depth the perspectives of each actor in the collaboration process. Therefore, further research is recommended to use empirical approaches based on primary data, such as in-depth interviews and field studies, to identify patterns of power relations, actors' interests, and the effectiveness of ongoing coordination mechanisms. In addition, future research needs to test more integrative collaboration models, including the development of alternative economic empowerment schemes and adaptive, sustainable collaborative institutional designs.

REFERENCES

- Pribadi, Agung. (2022). *Kementerian ESDM RI - Media Center - Arsip Berita - Pertambangan Tanpa Izin Perlu Menjadi Perhatian Bersama 2025-11-26 09-54-52Z*.
- Amimah, A. H., Meylim, N. B. N., & Putra, F. A. Al. (2022). Land Conversion, Flooding and Climate Change: A Critique of Forest Protection in Indonesia. *Journal of International Studies on Energy Affairs*, 6(2), 173–203. <https://doi.org/10.51413/jisea.Vol6.Iss2.2025.173-203>
- Ansell, C., & Alison Gash. (2008). *Collaborative Governance in Theory and Practice ~ Journal of Public Administration Research*.
- Asaf, A. S. (2020). Upaya Pemenuhan Kebutuhan Dasar Manusia. *Jurnal Ilmiah Cakrawarti*, 2(2), 26–31. <https://doi.org/10.47532/jic.v2i2.126>
- Basri, M., Upe, A., Larisu, Z. (2024). Model Kolaborasi Antara Kepolisian Daerah Sulawesi Tenggara Dan Pemerintah Daerah Kota Kendari Dalam Pembangunan Keamanan Dan Pencegahan Kejahatan Di Wilayah Kota Kendari Collaboration Model Between the Regional Police of Southeast Sulawesi and the Region. *Jurnal Administrasi Pembangunan Dan Kebijakan Publik*, 15(2), 2502–5589.
- Chania, I., & Hidayat, M. (2024). Preserving Primate Paradises: Innovative Communication Risk Strategies For Deforestation Prevention In The Enchanting Mentawai Islands, Indonesia. *Jurnal Ekonomi*, 13. <https://doi.org/10.54209/ekonomi.v13i01>
- Christian, J., Supanto, S., Kristiana, Y., & Ullah, M. F. (2025). Optimizing Asset Recovery as a Legal Instrument in Environmental Crimes: Strategic Approaches for Asset Recovery Agencies. *Journal of Law, Environmental and Justice*, 3(3), 673–706. <https://doi.org/10.62264/jlej.v3i3.213>
- Ciptadi, J. (2025). *Optimalisasi Penegakan Hukum Tindak Pidana Pertambangan Timah Ilegal Dikawasan Pantai (Studi Di Kabupaten Bangka Barat)* [Thesis, Lampung University]. Digilib Unila.
- Collins, S. P., Storrow, A., Liu, D., Jenkins, C. A., Miller, K. F., Kampe, C., & Butler, J. (2021). *Implementasi Kebijakan Penanganan Pertambangan Batuan Ilegal (Studi Kasus Di Kabupaten Gowa)*. 167–186.
- Dan, I., Tim, K., & Puskesmas, D. I. (2024). *Inovasi Dan Kinerja Tim Di Puskesmas*.
- Friskilia Junisa Bastiana Darongke, Dientje Rumimpunu, & Sarah D. L. Roeroe. (2022). Efektivitas Undang-Undang Nomor 3 Tahun 2020 Dalam Pemberian Izin Usaha Pertambangan Mineral Di Indonesia. *Lex Privatum*, 10(3), 2.
- Hamzani, A. I., Soeharto, A., Taufiq, T., Wibowo, D. E., & Kunantiyorini, A. (2025). Balancing Utilitarianism with Access to Environmental Justice: An Indonesian Case Study. *Environmental Policy and Law*, 55(4–5), 152–165. <https://doi.org/10.1177/18785395251374205>
- Holley, E. A., Rodriguez, O. F., Redwood, S. D., & Smith, N. M. (2022). Coexistence of Large-Scale Mining with Artisanal and Small-Scale Mining—A Guide for Geologists. *SEG Discovery*, (130), 22–34. <https://doi.org/10.5382/Geo-and-Mining-16>
- Samudera, R. S. (2025). The Implementasi Kebijakan UU Cipta Kerja Dalam Tata Kelola Ketenagakerjaan, Lingkungan, dan Perizinan Berusaha Berbasis Risiko di Indonesia Pasca-Pandemi. *DPMR*. 5(1), 68–80.
- Kholijah, S., & Santoso, B. (2022). Praktik Tambang Ilegal Ditinjau Dari Maqashid Syariah (Studi Kasus Sungai Kelurahan Tapus). *Jurnal Mabisya*, 3(1), 1–24.
- Kumiawan, L., & Gumiwang Aji Dharma. (2025). Kompleksitas Kejahatan Tambang yang Berdaulat. *PESHUM: Jurnal Pendidikan, Sosial Dan Humaniora*, 4(3), 5005–5016. <https://doi.org/10.56799/peshum.v4i3.9271>
- Maarten., Hajer. (2020). *Discourse Analysis and the Study of Policy Making*. Springer.
- Mungksa, O. (2022). *Optimalisasi Peran dan Fungsi Forum Penataan Ruang sebagai Wadah*

- Kolaborasi Pemangku Kepentingan*. https://www.researchgate.net/publication/360515832_Optimalisasi_Peran_dan_Fungsi_Forum_Penataan_Ruang_sebagai_Wadah_Kolaborasi_Pemangku_Kepentingan
- Nugraha, A. (2025). Mitigasi risiko kecelakaan bagi penambang timah inkonvensional di kabupaten bangka selatan provinsi bangka belitung. *IPDN Repository*, 1–18.
- Nugroho, A. W., & Sari, U. K. (2023). Stakeholder Identification For Collaborative Management Of Ecotourism And Proboscis Conservation. *International Journal of Conservation Science*, 14(2), 713–730. <https://doi.org/10.36868/IJCS.2023.02.23>
- Nurfadila, N., Imfyan, H. D., & Zulkamaini, Z. (2024). Efektivitas Kebijakan Penertiban Penambangan Emas Tanpa Izin Dalam Mengurangi Kerusakan Lingkungan Hidup di Kabupaten Kuantan Singingi. *SENADIK: Seminar Nasional Akademik Universitas Abdurachman Saleh Situbondo*, 1(1), 916–926.
- Panjaitan, E., & As'ari, H. (2025). Collaborative Governance Dalam Penertiban Pertambangan Galian C Ilegal Di Kabupaten Kampar. *Jurnal Niara*, 18(1), 225–235.
- Lubis, Z., Harahap, E. S., Andrian, L., Harahap, N. S., Lubis, S. H., (2012). *Kearifan lokal masyarakat mandailing dalam tata kelola sumberdaya alam dan lingkungan sosial*. Balai Pelestarian Nilai Budaya Banda Aceh.
- Prayuda, R., Munir, F., Admiral, Syafrinaldi, & Suyastri, C. (2025). The Evolving Threat of Narcotics Smuggling: A Non-Traditional Security Challenge in Southeast Asian Border States. *Journal of ASEAN Studies*, 13(1), 211–229. <https://doi.org/10.21512/jas.v13i1.13015>
- Rohman, A., Hartwiningsih, & Rustamaji, M. (2024). Illegal mining in Indonesia: need for robust legislation and enforcement. In *Cogent Social Sciences* (Vol. 10, Number 1). Cogent OA. <https://doi.org/10.1080/23311886.2024.2358158>
- Rusmiyati, C., Wahyono, E., Carolina, Tursilarini, T. Y., & Tantri, E. (2026a). Participatory Governance of Customary Forests: Institutional Collaboration in Islamic Law and Customary Law Perspectives. *Al-Manahij: Jurnal Kajian Hukum Islam*, 20(1), 21–42. <https://doi.org/10.24090/mnh.v20i1.15484>
- Rusmiyati, C., Wahyono, E., Carolina, Tursilarini, T. Y., & Tantri, E. (2026b). Participatory Governance of Customary Forests: Institutional Collaboration in Islamic Law and Customary Law Perspectives. *Al-Manahij: Jurnal Kajian Hukum Islam*, 20(1), 21–42. <https://doi.org/10.24090/mnh.v20i1.15484>
- Sahrul, & Daulay, A. F. (2025). The Local Wisdom Of Indigenous Communities, Religious Leaders, And Intellectuals In Mitigating The Social Impacts Of Illegal Gold Mining In West Pasaman, West Sumatra. *Miqot: Jurnal Ilmu-Ilmu Keislaman*, 49(1), 50–73. <https://doi.org/10.30821/miqot.v49i1.1375>
- Sandi, M, D. (2018). Aktivitas penambang emas tanpa izin (peti) di kecamatan batang natal kabupaten mandailing natal (2004–2017). *Jurnal Education and Development*, 4(1), 125–128.
- Saputra, T., Zuhdi, S., Kusumawardhani, F., & Novaria, R. (2023). The Effect of Economic Development on Illegal Gold Mining in Kuantan Singingi, Indonesia. *Journal of Governance*, 8(1). <https://doi.org/10.31506/jog.v8i1.16883>
- Saputri, S., & Prayuda, R. (2026). Public Policy Customs Strategy In Preventing Cross-Country Narcotics Smuggling Via Sea Routes: A Case Study Of The Indragiri Hilir Indonesia-Malaysia Border (2022–2025). In *Journal Of International Relation* (Number 2).
- Sofyan, M., & Priyanto, S. (2025). The Deradicalization Paradox: When Former Terrorists Become Perpetrators of Economic Crimes. *Security Intelligence Terrorism Journal (SITJ)*, 2(2), 66–76. <https://doi.org/10.70710/sitj.v2i2.52>
- Sudaryat, S., Yuanitasari, D., & Judiasih, S. D. (2024). Policy and implementation of gender equality in Indonesian mining companies as an approach to achieve the goals of Indonesian SDGS. *Cogent Social Sciences*, 10(1). <https://doi.org/10.1080/23311886.2024.2400602>
- Sundari, C., Purnomo, E. P., & Fathani, A. T. (2022). Civil society participation model: forest and land fire prevention policy in Jambi Province. *Jurnal Pengelolaan Sumberdaya Alam Dan Lingkungan*, 12(4), 669–678. <https://doi.org/10.29244/jpsl.12.4.669-678>
- Tongkotow, E., Pati, A. B., & Posumah, D. (2023). Konflik Pada Pertambangan Emas Tanpa Izin di Kecamatan Rataotok Kabupaten Minahasa Tenggara. *Jurnal Sam Ratulangi Politics Review*, 1(1), 1–14.
- Utami, M. P. P. (2025). Analysis of river water pollution control due to activities gold mining: Causes, impacts, and effective and sustainable control efforts. *Journal of Critical Ecology*, 2(1). <https://doi.org/10.61511/jcreco.v2i1.1742>
- Zein, Y. A., Syapriallah, A., & Idris, R. (2023). The Regulations for Management of Coastal Natural Resource Conflicts in Indonesia-Malaysia Border. *Bestuur*, 11(2), 192–216. <https://doi.org/>