Jurnal
ILMU KEPOLISIAN
P-ISSN : 2620-5025
E-ISSN : 2621-8410

Vol. 18, No. 3, 2024

Indonesia's Environmental Crimes: A Critical Perspective of the 'State' as the 'Victim'

Submitted 8 November 2024, Revised 28 November 2024, Accepted 9 December 2024, Published 18 December 2024

Pipit Rismanto[1*], Muhammad Krisna Bayunarendro[2]

[1]West Kalimantan Regional Police, Indonesian National Police, Indonesia.
[2]School of Social and Political Sciences, University of Glasgow, Glasgow, United Kingdom.
Corresponding Email: *pr94tp@gmail.com

DOI : https://doi.org/10.35879/jik.18i3.592

Abstract

In the midst of various environmental crimes that are being increasingly profiled around the world, the perspective of the 'state' is often overlooked as the entity of the 'victim'. In fact, in addition to individuals, communities, and the environment the state is often harmed from various environmental crimes. Through a qualitative approach with the methods of *Qualitative Content Analysis (QCA)*, an *Extended Literature Review (ELR)*, and *Critical Discourse Analysis (CDA)*, this paper finds the direct and indirect impacts of the outbreak of environmental crimes in Indonesia from the perspective of the 'state'. This papers also examines the many paradoxes that can be created when the law is used by the state as the solution. In addition, this paper explores various *SGC* perspectives that emphasise considering the *socio-economic* and *historical-cultural* contexts of countries in the Global South. Finally, this paper recommends a transformative justice approach that emphasises reforms and improvements to governance that are more inclusive and sustainable, primarily to address environmental crimes in Indonesia that also focus on restoring environmental damage. This paper also emphasises the importance of strengthening regulations and education related to sustainable environmental education for the community. With a focus on positioning the state as a victim, this research is expected to fill a gap in the literature and be useful in the practical realm.

Keywords*:* Indonesia, Environmental Crimes, State as Victim, Southern Green Criminology.

INTRODUCTION

In recent decades, environmental crimes have become complex issues facing *resource-rich countries* around the world, including Indonesia – a country rich in both renewable and non-renewable natural resources (Goyes, 2019; Kahfi, 2014; Tonen et al., 2021). Indonesia's natural resources are highly diverse and spread across all provinces. They provide one the main foundations for economic diversification that contributes significantly to state revenue (see Bakar, 2020; Pradiptyo et al., 2021). The gold mining sector, for example, has become the world's 'prima donna' in recent years, as in addition to contributing domestically, the sector has become the sixth largest supplier in fulfilling the global supply chain (see Annur, 2024). But behind its contribution, almost every natural resource owned by Indonesia has been infiltrated by various crimes, including environmental crimes (Kahfi, 2014). For example, within the mining sector, based on data from the Ministry of Energy and Mineral Resources,

there are more than 2,741 illegal mining points, most of which involve small-scale gold mining (Lumowa, 2021; Meutia et al., 2021).

The term 'environmental crime' is usually used as an 'umbrella term' for all types of crimes related to biodiversity, natural resource extraction, flora and fauna, and various things that can degrade the quality of the environment inhabited by humans and other earth inhabitants (Gibs and Boratto, 2017; Lynch et al., 2019; White and Heckenberg, 2014). Some examples of environmental crimes besides Illegal mining are, for example, Illegal logging, hazardous waste disposal, forest and land fires, and many more (Ibid). Environmental crimes not have destructive impacts – which impact individual victims or wider society at large (Ibid), but also often trigger natural disasters that can themselves have further impacts, such as landslides, floods, deforestation, water pollution and degraded air quality (Ibid).

On the other hand, when discussing the definition of 'victims' of environmental crimes, it seems is a 'stagnant-simplistic' position in interpreting 'crime-victims' (Freiberg, 1988), and there has been little progress within criminology or victimology for nearly four decades. Almost all attention to date has interpreted 'victims of crime' as 'individuals' who are affected and harmed by criminality, including environmental crimes (Ibid). This perspective can make our comprehension of 'victimology' to be narrow, so that we often demand the responsibility of the state to be present and repair all impacts (Ibid). On the other hand, if seen from a broader perspective, the state is also a victim of the existence of environmental crimes.

Ultimately, this paper argues that the state is also a victim of the proliferation of environmental crimes, both in terms of state revenue leakage as well as having to bear the expensive restoration costs of environmental damage, which are often imposed on it (Pattimahu, 2004; Zabyelina and Van Uhm, 2020) and resisted by communities when trying to respond (see Ridwan, 2017; Rangkuti, 2024). While many studies have focused on individual victims or the environmental damage caused by environmental crimes, this paper will look at these issues from the perspective of the 'state', and aims to fill a gap in the existing literature. There is limited literature that has examined the 'state as a victim' of environmental crimes. As such, this paper helps promote the importance of considering the 'state as victim' perspective, highlighting the idea that the state may not necessarily be fully to blame for the proliferation of environmental crimes.

METHOD

This research project utilises a qualitative approach by analysing secondary data taken from various research gates using Qualitative Content Analysis and an Extended Literature Review. This method was chosen as it is considered the most relevant in terms of validity and reliability as it is derived from published literature as well as in accordance with the research time period. To extract and analyse the information, in addition to using the QCA and ELR guidelines as in Cho and Lee (2014) and Onwuegbuzie and Frels (2016), this research utilises Critical Discourse Analysis as outlined by Fairclough (2013) to interpret the content, format, and context of the data. Although there are

weaknesses in using secondary data sources, such as the criticisms highlighted by Ruggiano and Perry (2019), Hinds et al. (1997) argued that such data can be used as long as it is suitable, relevant and can answer the research questions. This paper also uses 'prospective reflexivity' as suggested by Epedal et al. (2022) to encourage researchers to continuously self-reflect at every stage of the literature review process. This aims to maintain the validity and reliability of the research from bias even though it only uses secondary data (Ibid).

RESULTS AND DISCUSSION

State financial leakage and costly restoration costs imposed:

Over the past few years environmental crimes in Indonesia have had a considerable impact, both on society, the environment, and on the state. A Financial Action Task Force report (2021) stated that state losses from environmental crimes in Indonesia are estimated to reach IDR 4,612.6 T annually (approx. 291 billion USD). This is due to the consequences of illegal mining activities, illegal logging, and the disposal of hazardous waste not in accordance with the legal provisions (Ibid).

Arifin Tasrif, Ministry of Energy and Mineral Resources, stated that the illegal mining sector was estimated to have caused financial leakage of up to IDR 3.5 T in 2022, (approx. 222.6 million USD), which could have been used as state revenue (Bhawono, 2022). If the mining activities were carried out legally, tax and royalty revenues would have exceeded IDR 173.5 T (approx. 11.04 billion USD) in 2022. In addition, from other commodities, for example, crimes that cause forest and land fires that also cause huge state losses, in 2015 alone these were estimated to cause potential losses of up to IDR. 220 T (approx. 14 billion USD) (Setkab, 2015). The potential tax that lost in the plantation sector has also been estimated at IDR 18.13 T (approx. 1,155 billion USD) (Pradiptyo et al., 2021).

In addition to the impact on direct revenue, there has arguably been a domino effect to cause a deficit in the state budget, leading to reductions in budget allocations in other sectors, such as education, infrastructure, and health. For example, for hospital construction of IDR. 250 billion (approx. 15.8 million USD) (see Ministry of Finance, 2022), then the financial leakage that has harmed the state, as outlined in the FATF 2021 report, could have built up to 18,448 hospitals in Indonesia. In terms of disasters such as floods or landslides that arise due to these environmental crimes (see Syaifulloh, 2021; Zabyelina and Van Uhm, 2020), the state must also budget for rescue efforts for the affected victims. As an example, see the disaster that occurred in an illegal mining pit in Banyumas, Central Java, due to a landslide in an illegal gold mining concession. This led to eight illegal miners needing evacuation as they were trapped in an illegal mining pit (Zain and Arief, 2023). Or see the case of forest and land fires, where the state needs to intervene to extinguish fires that arise as a result of environmental crimes (see Suparta, 2024).

In addition, the state must also allocate spending to restore all existing damage. For example, Ministry Tasrif argued that due to illegal mining in forest areas, the restoration and environmental recovery that must be borne by the state is estimated to reach Rp. 1.5 T (Approx 95.2 million USD)

(Bhawono, 2022). In terms of laws and regulations, the state has also made efforts, such as the creation of various task forces to other efforts aimed at monitoring various environmental crimes (see Purnama, 2021).

When the state attempts to implement laws and regulations and to enforce the law in a retributive manner (see Harsdjosoepono et al., 2023), it must also expend effort and bear the budgetary burden at every stage, starting from investigations and through to the trial process (Brown, 2004; Ramadhan, 2016). In addition, once a verdict has been reached, the state must also pay for the operational costs of imprisoning offenders, such as food and rehabilitation programmes in prison (see Prabowo, 2016).

Under the law, Article 54 paragraph (2) of Law Number 39 of 2009 concerning the Environment mandates that: “every person who pollutes and/or damages the environment is obliged to restore the function of the environment” (see Indonesia, 2009). If the context of the law is interpreted fully, then everyone who damaged the environment should be made responsible for restoring and repairing the environmental damage to restore ecological life to its normal condition.

However, have these actors fulfilled the mandate of the law? It is arguable that the restoration of land due to damage has not been carried out by these business actors, as evidenced for example in Wicaksono (2024) or in Prasetyo (2020). Various residents continue to demand that environmental damage is repaired by the state. Another example of business disregard for reclamation can be seen in several cases of children dying from swimming in un-reclaimed mine pits (see Media Kaltim, 2024; Sucipto, 2024). These innocent children have become victims of this environmental crime.

Ultimately, we can argue that the responsibility for environmental damage inflicted by various business actors – whether legal or illegal – is often not imposed on those responsible, and it becomes the responsibility of the state to fix. It is in this position that the state is arguably being victimised through this activity. Following this argument, can retributive law enforcement be a suitable response? This will be discussed in the next section.

Law Enforcement Response: between resistance, conflict and ineffectiveness.

Law enforcement in Indonesia often refers to the three basic values expressed in Radburch (1978), that the law must be able to fulfil three principles: justice, certainty, and usefulness. On the other hand, the implementation of these values sometimes contradicts itself. For example when law enforcement is enforced to fulfil justice, it may bring more harm than benefit. Similarly, under the principle of expediency, enforcing the law can contradict the notion of universal justice that is expected from law enforcement. The impacts of these various issues are not only felt in Indonesia, but also around the world, leading to the emergence of a fundamental dichotomy between those who support law enforcement and optimise the role of prisons, and those who adhere to *abolitionist* ideas and movements that criticise prisons and criminal law enforcement (Bagaric et al., 2021; Liebling and Ludlow, 2016).

Abolitionist ideology continues to question the effectiveness of criminal law enforcement, particularly the use of imprisonment, as it is often seen as suboptimal and frequently fails to reduce crime (Ibid).

Philosophically, the enforcement of criminal law and the use of imprisonment are expected to not only fulfil retributive and public protection functions, but also to provide deterrence, incapacitation, and rehabilitation (Coyle, 2016). However, as the use of prisons has grown, there has been criticism that they often fail to rehabilitate offenders, as many offenders fail to achieve desistance (McNeill and Graham, 2020). Despite the implementation of various rehabilitation and job training programmes within prisons – aimed at removing the 'the desire to offend' – the fact remains that many are recidivists who reoffend after release (Davis, 2003; McNeill and Schinkel, 2016).

McNeill (2021) introduced 'the penal paradox', which argues that when the state responds to crime with increasingly punitive and retributive responses, it tends to lead to a cycle of repeated crime, due to the complexity of the factors of influence, both when the offenders are inside and outside prison (Ibid). These conditions include overcrowding, suboptimal rehabilitation and job training programmes, being unprepared for employment when they leave prison, or other prison operations that are not in line with the aim of rehabilitating and changing the behaviour of inmates (Davis, 2003; Bagaric et al., 2021). Ultimately, Radburch's (1978) principle of expediency in law enforcement is questioned, as 'prison' does not always lead to the expected benefits.

In Indonesia, while law enforcement is expected to act as a deterrent to perpetrators of environmental crimes, the fact is that environmental crimes still occur and the number of crimes has not reduced. For example, forest and land fires continue to increase every year (MacCarthy et al., 2024), while illegal mining is still found in various locations in Indonesia, despite law enforcement (Hasibuan et al., 2021).

Other factors contribute to the dilemmatisation of this retributive law enforcement of environmental crimes. Law enforcement against environmental crimes can often lead to friction with the community that ultimately causes resistance turmoil (Ridwan, 2017; Rangkuti, 2024; MetroJambi, 2022). The police acting as representation of the state may also cause clashes with local communities. For example, in Merangin, Jambi Province, police officers were held 'hostage' by local residents when trying to enforce the law against illegal gold mining in the area (MetroJambi, 2022). Many factors influence and trigger the occurrence of environmental crimes, as the motivation of perpetrators is based on economic motives or inherent customs and culture (Goyes, 2019; Hasibuan et al., 2021). Ultimately, it is becoming clear that the state is being victimised because of environmental crimes, as in addition to spending efforts and money on tackling these crimes, the state also has to deal with conflicts with communities. While it is indeed the case that law enforcement itself can also recover state losses (such as the fine of up to IDR 920 billion (approx. 58 million USD) against PT RKA, which was proven to have caused forest and land fires), as discussed earlier are the environmental damages caused by the crime and any enforcement actions comparable? Any fines go to the 'state treasury' and are not directly allocated to repairing the environmental damage (Gunawan,2023). This research suggests that in dealing

with environmental crimes, state officials must examine law enforcement through cost-benefit analyses (Brown,2004). As an example, Zimbabwe faced huge inflation because it responded to illegal mining with massive law enforcement and large-scale imprisonment (Spiegel, 2014).

The Southern Green Criminology Perspective: Responding to Environmental Harms.

The perspective of GC scholars in the Global North, for example in Spapens et al. (2014), is that all types of human activities aimed at fulfilling life derived from the extraction of natural commodities – both illegal and legal – tend to be considered equally detrimental and have a broad impact on environmental damage; however, these scholars also argue that illegal activities have a more destructive impact on the environment and the ecological life within it (Goyes, 2023). Natural resource extraction activities often victimise, marginalise and negatively impact local communities, both in the long and short term, causing environmental degradation, the loss of primary livelihoods and disruption to local ecosystems (Goyes, 2019, 2023).

While GC academics in the Global North – such as in Spapens et al. (2014) – emphasise that all types of environmental crimes should be seriously addressed with strict law enforcement while adhering to the limits of human rights violations, arguing for the strengthening of regulations or imposition of heavier sanctions, SGC academics such as Goyes (2019) instead suggest a need to examine the historical-cultural context and unique socio-economic conditions in Global South Countries. The uniqueness of these southern countries is considered to have been heavily influenced by the history of colonisation in the past (West, 2022), which has led to many Global South countries being constrained in terms of economic independence and sustainable development (Mahardika, 2022; West, 2022).

Many other complex factors drive individuals in southern countries to commit environmental crimes, from poverty to ingrained customs and cultural habits (Goyes, 2019; Tonen et al., 2021). This is also in line with the Nexus Between Crime and SDG's Theory outlined in Blaustine et al. (2020), that arguably environmental crimes can be driven by a nexus of factors, such as poverty, economic inequality, lack of access to education, lack of employment, and various socio-political discriminations that can cause a person to be marginalised.

Therefore, when referring to the SGC, the solution offered in the context of environmental crimes should not just be to use law enforcement to imprison perpetrators, but on inclusive and comprehensive transformative justice (Goyes, 2019). In line with the legal principle of *Ultimum Remedium*, criminal law should be the last alternative (Naibaho, 2021). SGC emphasises that in addition to improving governance in an inclusive and sustainable manner, what is really needed is to educate and raise public awareness to maintain environmental sustainability, because as an integral part of being an inhabitant of the Earth, it is fitting that each individual human being is also responsible for continuing to preserve and maintain its sustainability (Goyes, 2019, 2023; Shearing, 2015). It is necessary that all parties take responsibility and must collaborate in implementing solutions.

CONCLUSION

In light of this analysis and discussion, evidence has shown that environmental crimes are multidimensional issues with a broadimpacts – not only on the environment, individuals and communities, but also on the state as an entity that is often overlooked as a 'victim'. While many efforts have been made by the Indonesian state to fulfil the mandate of its constitution (which is to utilise various natural resources for the welfare and prosperity of the people), the state continues to be undermined by the actions of environmental criminals. This causes the need for the state to adopt additional corrective measures to overcome the impacts caused. On the other hand, while retributive law enforcement is expected to be a solution, evidence has shown various paradoxes and ineffectiveness in its ability to reduce crime.

The fundamental mandate of SGC is to consider the context of 'uniqueness' in the global south, such as historic cultures and socio-economic conditions that are different from countries in the global north. These issues must also be calculated and taking into consideration when determining solution steps. On the other hand, when the SGC affirms that all humans are integral inhabitants of the planet and have a fundamental responsibility in maintaining and preserving the environment, caring for the environment, and protecting flora and fauna, should not only be absolutely charged to the state. This also applied to changing the perspective of people less aware of the environmental impacts of their activities. These factors should be the collaborative responsibility of all parties.

Finally, in line with SGC, this paper agrees that the solution is to improve governance to make it more inclusive and sustainable, strengthening regulations that are more favourable to various parties, as well as offering environmental education and awareness raising to entire communities, so that all parties become more aware of caring for and preserving the earth instead of just exploiting it.

REFERENCES

Annur, C. M. (2024, January 3). *Pendapatan negara tembus Rp2.700 triliun pada 2023, mayoritas dari pajak*. Databoks Katadata. Retrieved November 2, 2024, from https://databoks.katadata.co.id/datapublish/2024/01/03/pendapatan-negara-tembus-rp2700-triliun-pada-2023-mayoritas-dari-pajakAsworth

Ashworth, A. and Roberts, J. V. (2012). Sentencing: Theory, Principle, and Practice. In M. Maguire, R. Morgan, & R. Reiner (Eds.), *The Oxford Handbook of Criminology* (7th ed., pp. 235–236). Oxford University Press.

Bagaric, M., Hunter, D. A. N., & Svilar, J. (2021). Prison abolition from naïve idealism to technological pragmatism. *The Journal of Criminal Law and Criminology (1973-), 111*(2), 351–406.

Bhawono, A. (2022). *Potensi kerugian negara tambang ilegal 2022 capai Rp3,5 triliun*. Betahita. Retrieved November 3, 2024, from https://betahita.id/news/detail/8601/potensi-kerugian-negara-tambang-ilegal-2022-capai-rp3-5-triliun.html?v=1695349095

Booth, A. (2016). The colonial legacy. In *Economic change in modern Indonesia: Colonial and post-colonial comparisons* (pp. 12–34). Cambridge University Press.

Bree, R. T., & Gallagher, G. (2016). Using Microsoft Excel to code and thematically analyse qualitative data: A simple, cost-effective approach. *All Ireland Journal of Higher Education, 8*(2). Retrieved from http://ojs.aishe.org/index.php/aishe-j/article/view/281

Brown, D. K. (2004). Cost-benefit analysis in criminal law. *California Law Review, 92*(2), 323–372.

Budó, M. de N., França, K. Á., & Natali, L. (2023). Beyond retributive justice: Listening to environmental victims' demands in Brazil. In D. R. Goyes (Ed.), *Green crime in the global South* (pp. 211–234). Palgrave Studies in Green Criminology. Cham: Springer Nature Switzerland AG.

Coyle, A. (2016). Prison in context. In Y. Jewkes, B. Crewe, & J. Bennett (Eds.), *Handbook on prisons* (2nd ed.). Routledge. https://doi.org/10.4324/9781315797779

Davis, A. (2003). *Are prisons obsolete?* New York: Seven Stories Press. Chapter 5: The prison industrial complex (pp. 84–104) and Chapter 6: Abolitionist alternatives (pp. 105–127).

Ervanda, R. P., Miftahul, F., & Yoga, P. S. (2020). Mengapa korupsi sulit diberantas. *Jurnal Ilmu Hukum dan Ilmu Politik, 1*(1), 30–41. Retrieved from https://dinastirev.org/JIHHP

Fairclough, N. (2013). Critical discourse analysis. In J. P. Gee & M. Handford (Eds.), *The Routledge handbook of discourse analysis* (pp. 9–20). Routledge.

Financial Action Task Force. (2021). *Money laundering from environmental crime: Public and private sector implications*. Paris: FATF. Retrieved from http://www.fatf-gafi.org/

Freiberg, A. (1988). The state as a victim of crime. *Australian and New Zealand Journal of Criminology, 21*, 20–30.

Gibbs, C., & Boratto, R. (2017). Environmental crime. *Oxford Research Encyclopedia of Criminology*. Retrieved from https://oxfordre.com/criminology/view/10.1093/acrefore/9780190264079.001.0001/acrefore-9780190264079-e-269

Goyes, D. (2019). *Green Southern criminology: Science against ecological discrimination*. Bingley: Emerald Publishing.

Goyes, D. R. (Ed.). (2023). *Green crime in the global south: Essays on southern green criminology*. Cham: Springer Nature Switzerland AG.

Gunawan, M. (2023). PT Rafi Kamajaya Abadi didenda Rp 920 M akibat karhutla. *Poros Jakarta.*

Retrieved November 28, 2024, from https://www.porosjakarta.com/nusantara/061796611/pt-rafi-kamajaya-abadi-didenda-rp-920-m-akibat-karhutla

Hardjosoepono, A. R., Kuncoro, B. A. D., Yanottama, F. A., & Hutagalung, J. A. S. (2023). Minimnya peran negara dalam pengelolaan lingkungan hidup pada kawasan pertambangan. *Universitas Negeri Semarang*, *10*(3).

Hinds, P. S., Vogel, R. J., & Clarke-Steffen, L. (1997). The possibilities and pitfalls of doing a secondary analysis of a qualitative data set. *Qualitative Health Research*, *7*(3), 408–424.

Indonesia. (2009). *Law Number 32 of 2009 on Environmental Protection and Management*. State Gazette of the Republic of Indonesia of 2009 Number 140.

Kahfi, A. (2014). Kejahatan lingkungan hidup. *Jurnal Hukum Lingkungan*, *3*(2), 206–216.

Kahfi, A. (2014). Kejahatan lingkungan hidup. *Al Daulah: Jurnal Hukum Pidana dan Ketatanegaraan*, *3*(2), 206–216.

Kementerian Keuangan Republik Indonesia. (2022). *Siaran pers: Realisasi PNBP Semester I 2022*. Retrieved from https://www.kemenkeu.go.id/informasi-publik/publikasi/siaran-pers/Siaran-Pers-Realisasi-PNBP-Semester-I-2022

Kementerian Keuangan Republik Indonesia. (2022). *Anggaran subsidi dan kompensasi Rp502,4 triliun*. Retrieved from https://www.kemenkeu.go.id/informasi-publik/publikasi/berita-utama/Anggaran-Subsidi-dan-Kompensasi-Rp502,4-triliun

Liebling, A., & Ludlow, A. (2016). Suicide, distress and the quality of prison life. In Y. Jewkes, B. Crewe, & J. Bennett (Eds.), *Handbook on prisons* (2nd ed.). Routledge. https://doi.org/10.4324/9781315797779

Lumowa, R., Utomo, S. W., Soesilo, T. E. B., & Hariyadi, H. (2022). Promote social order to achieve social and ecological justice for communities to prevent illegal artisanal small-scale gold mining. *Sustainability*, *14*(9530). https://doi.org/10.3390/su14159530

Lynch, M. J., Long, M. A., & Stretesky, P. B. (2019). *Green criminology and green theories of justice: An introduction to a political economic view of eco-justice*. Cham, Switzerland: Palgrave Macmillan.

MacCarthy, J., Richter, J., Tyukavina, S., Weisse, M., & Harris, N. (2024, January 5). Data terbaru mengonfirmasi kebakaran hutan semakin memburuk. *WRI Indonesia*. Retrieved from https://wri-indonesia.org/id/wawasan/data-terbaru-mengonfirmasi-kebakaran-hutan-semakin-memburuk

Mahardika, M. D. G. (2022). Titik balik ekonomi Indonesia pasca kemerdekaan: Perspektif materialisme historis. *Heuristik: Jurnal Pendidikan Sejarah*, *2*(2), 55–64.

McNeill, F. (2014). Punishment as rehabilitation. In G. Bruinsma & D. Weisburd (Eds.), *Encyclopedia of criminology and criminal justice* (pp. 4195–4206). Springer.

McNeill, F. (2021). Reducing reoffending and enabling reintegration: Plenary address to the UN Congress on Crime Prevention and Criminal Justice, Kyoto, 8-9 March 2021. *United Nations Asia and Far East Institute*. Retrieved from https://www.unafei.or.jp/publications/pdf/14th_Congress/10_Dr.Fergus_McNeill.pdf

McNeill, F., & Schinkel, M. (2016). Prisons and desistance. In Y. Jewkes, B. Crewe, & J. Bennett (Eds.), *Handbook on prisons* (2nd ed.). Routledge.

Mediakaltim. (2024, January 5). Sudah 47 korban tewas di lubang tambang, Jatam: perusahaan harus diadili. *Mediakaltim.com*. Retrieved from https://mediakaltim.com/sudah-47-korban-tewas-di-lubang-tambang-jatam-perusahaan-harus-diadili/

Metrojambi.com. (2022). Razia PETI di Merangin mendapat perlawanan dari warga. Retrieved from

https://www.metrojambi.com/hukum/13550440/Razia-PETI-di-Merangin-Mendapat-Perlawanan-dari-Warga

Naibaho, N. (2021). Rethinking the *ultimum remedium* principle to support justice and strong law enforcement institutions in environmental crimes. In *IOP Conference Series: Earth and Environmental Science, 716*(1), p. 012068. IOP Publishing.

Onwuegbuzie, A. J., & Frels, R. (2016). Methodology of the literature review. In *Seven steps to a comprehensive literature review: A multimodal & cultural approach* (pp. 48–64). Sage Publications Ltd.

Pattimahu, D. V. (2004). Restorasi lahan kritis pasca tambang sesuai kaidah ekologi. *Makalah Falsafah Sains*. Pascasarjana IPB, Bogor.

Pradiptyo, R., Saputra, W., Nugroho, A., & Hutami, A. (2021). Ketika kekayaan alam tidak menyejahterakan: Pembelajaran dari pencegahan korupsi sektor sumber daya alam. *Jurnal Antikorupsi Integritas, 5*(2-2), 49–63. https://doi.org/10.32697/integritas.v5i2-2.482

Prasetyo, A. Y. (2020). Menagih komitmen memulihkan lahan bekas tambang. *Kompas*. Retrieved from https://www.kompas.id/baca/utama/2020/01/14/menagih-komitmen-memulihkan-lahan-bekas-tambang

Purnama, S. (2021). Begini strategi pemerintah tangani pertambangan tanpa izin. *Antaranews*. Retrieved from https://www.antaranews.com/berita/2457409/begini-strategi-pemerintah-tangani-pertambangan-tanpa-izin

Radbruch, G. (1978). *Einführung in die Rechtswissenschaft* (4th ed.). De Gruyter.

Ramadhan, C. (2016). *Analisis ekonomi dalam kebijakan pidana di Indonesia*. Institute for Criminal Justice Reform (ICJR) - MaPPI FHUI – Aliansi Nasional Reformasi KUHP.

Rangkuti, L. (2024, March 31). Ratusan warga adang polisi yang hendak tutup tambang emas ilegal di Madina,Sumut. *Okezone News*. Retrieved from https://news.okezone.com/read/2024/03/31/608/2990446/ratusan-warga-adang-polisi-yang-hendak-tutup-tambang-emas-ilegal-di-madina-sumut

Ridwan. (2017, July 19). Markas Polres diserang penambang PETI bersenjata. *Tribunnews*. Retrieved from https://jambi.tribunnews.com/2017/07/19/markas-polres-diserang-penambang-peti-bersenjata#google_vignette

Ros-Tonen, M. A., Aggrey, J. J., Somuah, D. P., & Derkyi, M. (2021). Human insecurities in gold mining: A systematic review of evidence from Ghana. *The Extractive Industries and Society, 8*(4), 100951.

Sekretariat Kabinet Republik Indonesia. (2015). Kerugian kebakaran hutan 2015 Rp220 triliun, Presiden Jokowi minta tahun ini tidak terulang lagi. Retrieved from https://setkab.go.id/kerugian-kebakaran-hutan-2015-rp220-triliun-presiden-jokowi-minta-tahun-ini-tidak-terulang-lagi/

Shearing, C. (2015). Criminology and the Anthropocene. *Criminology and Criminal Justice, 15*(3), 255–269.

Spapens, T., White, R., & Kluin, M. (Eds.). (2014). *Environmental crime and its victims: Perspectives within green criminology*. Ashgate Publishing.

Spiegel, S.J., (2014). Legacies of a nationwide crackdown in Zimbabwe: Operation Chikorokoza Chapera in gold mining communities. *The Journal of Modern African Studies*, 52(4), pp.541-570.

Sucipto. (2024, November 5). 44.000 lebih lubang hingga 45 nyawa melayang di Kaltim terkait tambang ilegal. *Kompas.id*. Retrieved from https://www.kompas.id/baca/nusantara/2024/11/05/44000-lebih-lubang-hingga-45-nyawa-melayang-di-kaltim-terkait-tambang-ilegal

Suparta, I. K. (2024). Enam helikopter dikerahkan padamkan api karhutla 1,073 hektare di Riau. *Antara News Mataram*. Retrieved from https://mataram.antaranews.com/berita/360631/enam-helikopter-dikerahkan-padamkan-api-karhutla-1073-hektare-di-riau

Tierney, J., & O'Neill, M. (2009). *Criminological theory in context* (3rd ed.). Routledge.

Walklate, S. (Ed.). (2012). *Handbook of victims and victimology*. Routledge.

West, P. (2022, September 21). How colonialism spawned and continues to exacerbate the climate crisis. *State of the Planet, Columbia Climate School*. Retrieved from https://news.climate.columbia.edu/2022/09/21/how-colonialism-spawned-and-continues-to-exacerbate-the-climate-crisis/

White, R., & Heckenberg, D. (2014). *Green criminology: An introduction to the study of environmental harm*. Routledge.

Wicaksono, R. A. (2024). Warga Labota tagih tanggung jawab kerusakan lingkungan PT IMIP. *Betahita*. Retrieved from https://betahita.id/news/detail/10465/warga-labota-tagih-tanggung-jawab-kerusakan-lingkungan-pt-imip.html?v=1721862210

Zain, F. M., & Arief, T. M. V. (2023). Penyelamatan 8 penambang terjebak di lubang galian, Basarnas turunkan tim khusus *Kompas.com*. Retrieved from.https://regional.kompas.com/read/2023/07/29/094621778/penyelamatan-8-penambang-terjebak-di-lubang-galian-basarnas-turunkan-tim

Zabyelina, Y., & van Uhm, D. (Eds.). (2020). *Illegal mining: Organized crime, corruption, and ecocide in a resource-scarce world*. Springer Nature.