

Implementing Spatial Planning Based on Environmental Sustainability in the Mining Area

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Abstract

The problem of finite mineral and coal natural resources has been reopened by the growing demand for development and mining resources, which impacts the global arena. Environmental issues are just one of the issues caused by mining activities, which are another. In mining sites, there has to be an ongoing planning process based on the environment. This study addresses the existing mining regulatory framework and the problem of harmonization between spatial plans for mining regions based on environmental sustainability, with a particular emphasis on spatial planning for mining sites in Indonesia. Under the provisions of spatial planning, this article outlines the fundamental concepts of strategic environmental sustainability as a roadmap for sustainable growth in the mining industry. This study concludes that the idea of creating a mining business permit area is predicted to function as a tool for prevention against the emergence of significant environmental pollution and damage due to mining activities with the existence of an integrated concept of environmental licensing and spatial planning. Because this authority can be determined based on the size of "geographical-ecological", "economical", or "administrative" conditions, recommendations made with the existence of legal criteria relating to the determination of mining areas to become the authority of the Minister of Environment and Spatial Planning, Governors, and Regents/Mayors will result in the principle of environmental sustainability.

Keywords: Mining; Spatial Planning; Environment

INTRODUCTION

The usage of mineral and coal mining resources is an essential component of and a major demand for global growth (Litvinenko, 2020). The need for mineral and coal mining has developed quickly in response to population expansion and growing community development demands (Morrison et al., 2012). Regardless of one's point of view, mineral and coal mining resources are a must for modern industry. Mining for minerals and coal are non-renewable natural resources, which implies that excessive usage might have an impact on future supply (Fitri & Zahar, 2019). Some argue that natural resources, such as mineral and coal extraction (excluding energy generation), will not necessarily be depleted if there is the possibility of recycling or continued usage, particularly in exploitation. However, attempts to reuse or replace coal and mineral mining resources would just lengthen the timeline and resurface as a problem in the future. Business actors will continue to be involved in the planning and exploitation of mineral and coal mining resources as part of recycling efforts, so they must strike a balance between meeting present demands and optimizing the economic use of the outcomes of mineral and coal mining resources (THAMRIN, 2023).

Mineral and coal mining natural resources, when utilized indefinitely, will undoubtedly influence the environment as well as social consequences that will hurt the surrounding community. This is because mining can alter the terrain, kill or remove flora, generate tailings waste, as well as waste assistance, and drain water and surface water (Agboola et al., 2020). Ex-mining sites will produce massive ponds and patches of parched, acidic soil if not restored (Suranta, 2012). The compatibility of the development of mining activities that are vis-à-vis with spatial policies, particularly regarding the overlap between the land use for mining that is allegedly disregarding the principle of environmental sustainability, is one of the key issues in

current mining activities in Indonesia. Mining operations cannot be isolated from the national spatial planning strategy, as stated in Article 1 paragraph (29) of Law Number 3 of 2020 amending Law Number 4 of 2009 regulating Mineral and Coal Mining (Minerba Law): Mining Area, hereinafter referred to as WP, is an area that has Mineral and/or Coal potential and is not bound by government administration boundaries which is part of the national spatial plan.

Mining operations are dependent on the mining location region, which means that mineral and coal mining resources can only be generated in certain areas with a richness of subterranean natural resources. Finally, the activation of possible places for the exploitation of mineral and coal mining resources is linked to a variety of factors such as economic, environmental, and social situations. Thus, any repercussions coming from mining activities eventually directly on the national geographic plan, such as changes to spatial plans, and social, economic, and environmental impacts on the sustainability of the surrounding community's lives will influence the national spatial plan.

Through the modification of strategic and regulatory documents that ensure environmental sustainability and are inspired by regulatory standards and practices that are currently used in the international community, law plays a crucial role in organizing and managing the links between planning and implementing the mining jurisdiction concept (Redi, 2014). The 'Mineral and Coal Management Plan' concept, which was developed by the Minister while taking into consideration several factors, from the legal capacity of natural resources and the environment, regional spatial planning, to the availability of facilities and infrastructure, is one way that the Minerba Law revitalizes the compatibility between mining and spatial planning (Muta'ali et al., 2018). The issue is whether the fundamental principles have provided a solid guarantee for sustainable development in Indonesia that expects fairness between generations - at the same time, mining that impacts the environment will be constrained by the content of good environmental management (principles of good environmental governance) (Salim, 2018) as stipulated in UUPPLH 2009 which is in force today (*ius constitutum*).

This article provides theoretical exercises on some of the above-described normative rules that are relevant to sustainable development. To give alternative methods for creating future law (*ius constituendum*), this article will utilize the existing law (*ius constitutum*) as a touchstone for theoretical contemplation. The fundamental origins of sustainable development may be found in mineral and coal mining operations, and it starts with a reflection exercise by tracing those roots. It then examines how this essence is converted into the shape of normative norms. This article discusses the evolution of the idea of environmental administration law in the next part to supervise environmental management while choosing mining regions to accomplish the objective of sustaining the existence of sustainable development. The concept of an integrated licensing model, which unifies environmental management with spatial planning, serves as the conclusion of this paper.

The necessity of some of the topics presented in this article is to make an academic contribution to the mining law sector and its conformance with spatial planning policies, which are currently receiving little attention in various academic studies. In practice, rising environmental concerns on the one hand, and the need for the state to use natural resources for economic advancement on the other, must be handled in a way that benefits neither party. As a result, proper and comprehensive policies capable of optimizing the growth of the mining sector and spatial planning that is environmentally benign are required. It is also envisaged that this policy would give uniformity, clarity, and coordination from the government to mining authorities in their day-to-day operations.

RESEARCH METHODS

This legal research uses normative research, because it is intended to find legal rules, legal principles, and legal doctrines, as an effort to explain the legal issues studied. The approaches in this research include statutory and conceptual approaches. The statutory approach is used to examine problems with legal materials in the form of laws and regulations as the main or basic material in carrying out research. While the conceptual approach is used to examine a problem by providing a point of view or analysis of problem solving in terms of the legal concepts behind it or the values contained in the enactment of a regulation.

RESULT AND DISCUSSION

The Essence of Sustainable Mining Practices for Coal and Mineral Activities

To preserve consistency in the fulfillment of concepts and expectations in their application, a search for the essence that lurks behind them is important to understand how norms function in positive law. In the framework of global law and development, emerging legal theories have argued for and supported southern (developing) nations, particularly Indonesia, to incorporate Western law into their legal systems to encourage significant entrepreneurial efforts that will help drive economic progress. According to proponents of this line of reasoning, the Constitution as the primary source of law is viewed as a facilitator of neoliberal economic change that ignores social, economic, and environmental consequences (Jamaludin, 2016). The Constitution will shield and support the huge market from political intrusion through its rules, processes, and institutions (Grewal & Purdy, 2014). Article 33 of the Republic of Indonesia's 1945 Constitution (UUD NRI 1945) supports communitarianism and collectivist principles based on customary law and governmental control over natural resources, as well as critical production sectors.

The concept of sustainable development is a development concept in the field of environmental management that arises and originates from a sense of concern among world countries about the emergence of environmental damage and pollution as a result of mining activities which are increasingly worrying and concerns about the sustainability of the environmental sustainability function and its carrying capacity for the interests of the current generation. as well as future generations. This notion was conceived and refined during the United Nations High-Level Conference in Sweden in 1972. This meeting became known as the Stockholm Declaration in 1972. The Stockholm Declaration was held in 1972 in response to growing global awareness of environmental concerns and their consequences. Several publications and studies exposing the devastating impacts of pollution and environmental devastation were published in the 1960s, including Rachel Carson's *Silent Spring* (Carson, 2000). And there have been allegations of rising river and lake contamination. This has resulted in increased concern and pressure from civil society and environmental organizations to solve the issue. Furthermore, worries regarding environmental issues have developed among international leaders. At the time, many nations were experiencing tremendous economic expansion, and there were concerns that this growth might harm the environment and jeopardize future sustainability (Heinhard, 1980). As a result, the Stockholm Declaration was organized to fight for global environmental preservation and to develop an international framework to preserve the ecosystem healthy and sustainable. The Stockholm Declaration resulted in the adoption of several key documents, including the Stockholm Declaration on the Environment, the Stockholm Action Plan, and the establishment of the United Nations Environment Program (UNEP) as an international organization to coordinate global environmental policies and programs (Lummert, 1980).

Since the 1980s, the environmental political agenda has shifted toward the concept of sustainable development (Springett & Redclift, 2015). The notion of sustainable development reappeared in the International Union for the Conservation of Nature's World Conservation Strategy (1980), and Lester R. Brown used the word in his book *Building a Sustainable Society* (1981). Lester R. Brown's major point is that the globe at the time (and still now) has several challenges that must be addressed to develop a sustainable civilization. Among these issues include reliance on fossil fuels, global economic imbalances, poverty, and environmental degradation. Brown believes that activities involving all parts of life, including the political, economic, social, and environmental, are required to establish a sustainable society. He also emphasized the need for global collaboration and cooperation in overcoming this challenge. Brown also provides various examples of activities that may be implemented to build a sustainable society, such as employing renewable energy sources, limiting the use of environmentally harmful products, supporting organic farming, and enhancing education. Overall, Lester R. Brown's ideas in the book outline the immense obstacles that the globe has in developing sustainable civilizations and offer suggestions and examples of practice for accomplishing this aim (Simmonds, 1981). The phrase "sustainable development" became more common when the Brundtland report, *Our Common Future*, was published in 1987 (Holden et al., 2014).

The United Nations established the World Commission for Environment and Development following the Stockholm Declaration in 1972. The World Commission on Environment and Development (WCED) is the name of this commission. Referring to the tasks inherent in the WCED, the notion of sustainable development was introduced in its 1987 report titled "Our Common Future" (Priyanta, 2015). According to the research, every country must undertake sustainable development. According to the World Commission on Environment and Development, the boundaries of sustainable development are as follows: "Sustainable development is a development that meets the needs of the present without jeopardizing future generations' ability to meet their own needs." According to the WCED definition of sustainable development, the notion of sustainable development is founded on two ideas: *The concept of needs, in particular, the essential needs of the worlds poor, to which over-riding priority should be given* this concept provides affirmative attention and priority essentially to the poor in the country, as follows: *The idea of limitation imposed by the state of technology and social organization on the environment is ability to meet present and future needs* the concept of restrictions imposed by technological and social factors on the environment's capacity to satisfy existing and future demands (Mina, 2016). The political process culminated in 1992, when, at the Earth Summit in Rio de Janeiro, Brazil, the paradigm of sustainable development was recognized as a development political agenda for all governments worldwide (Mina, 2016).

By way of a legal definition, Indonesians translate sustainable development as "Environmentally Insight Sustainable Development." The phrase "sustainable development" is used to define:

Sustainable development is a deliberate and planned endeavor that incorporates environmental, social, and economic factors into a development strategy to ensure the integrity of the environment as well as the safety, capacity, welfare, and quality of life of current and future generations (Priyanta, 2015).

In the view of (Utama & SH, 2018), The notion of sustainable development in mining business license areas may be defined as follows if the many definitions of sustainable development are merged with the idea of WCED, "development that prudently and sensibly utilizes natural resources to suit the requirements of the present generation while also taking into account those of future generations" (Fristikawati et al., 2022). Through these constraints, the mining business permit area's development process and goals are still quantifiable, allowing for

the avoidance of development that justifies using any means necessary to satisfy the needs of both the present and the future generations in favor of development that is sensible and prudently focused only on serving the needs of the current generation. In this case, environmental sustainability to support human life and other living things is one of the basic elements in the concept of sustainable development (U. Awan, 2022). Eco-development will be used to determine the locations for mining company permits that include environmental sustainability components (FIKRI HADIN, 2021).

A development model known as "sustainable development" aims to address both the requirements of the present generation and those of future generations (Silalahi, 2003). This essence provides a message to policy formulators to prepare a normative legal framework that provides benefits from mining for now and also prepares them for the next generation (in the long term). Thus, the mining business permit area which is the basis for determining the macro-area mining area must be utilized not only to meet the needs of the present generation but in the future for future generations by the principles of intergenerational and intragenerational equity principle) (Silalahi, 2003).

The concept of sustainable development in defining mining business permit zones includes a very broad, integrative, and comprehensive component that includes not only a physical-ecological dimension, but also a social, cultural, political, and legal dimension (Ishak, 2007). Due to the significant inequality, the social, cultural, political, and legal components are crucial and necessary in the context of environmental management based on sustainable development for developing countries. Thus, the notion of sustainable development in the activity of selecting mining sites is a dynamic concept that must be continuously examined and developed, rather than a static-deterministic concept that cannot be changed. Modern environmental law includes the concept of sustainable development as well as a legal standpoint.

It is worth noting some of the sustainable development criteria developed by the Bali Sustainable Development Project (BSDP) Commission, which include aspects of culture and harmony or balance (Utama & SH, 2018). One of the main components considered in the BSDP is the cultural aspect. Bali has a rich and distinct culture, including Balinese Hindu religious traditions, art, dance, music, and spiritual beliefs. BSDP ensures that the island's growth does not harm or destroy this valuable cultural heritage, but rather encourages the preservation and appreciation of Balinese culture. Harmony and balance are also fundamental characteristics of Bali's sustainable development, according to the BSDP. This includes striking a balance between economic growth, environmental protection, and social well-being. This project attempts to create a sustainable economy while minimizing environmental damage and focusing on the well-being of local populations (A. G. Awan, 2013).

Thus, based on various descriptions related to the definition or limitation of sustainable development in the context of determining mining permit areas and its relationship to environmental management, it can be concluded that the formulation of sustainable development in determining mining areas essentially contains two concepts, namely: first, the concept of needs (needs), particularly the needs of the world's poor, which require priority handling. Second, the limitations of the environment's ability to meet both current and future human demands. Furthermore, sustainable development is a concept that promotes the integration of components or dimensions of sustainable development, such as economic, social, and environmental development, as pillars that support, rely on, and strengthen one another.

Legal Principles of Sustainable Development in the Perspective of the Environmental Protection and Management Law

The presence of sustainable development principles in natural resource and environmental management at the Rio de Janeiro Earth Summit, such as the principle of justice in one generation, the principle of early prevention, the principle of protecting biodiversity, and the

principle of internalizing environmental costs, is at the very least an important reference for countries seeking to protect natural resources and the environment from damage or pollution (Mukhlis, 2010). According to (A. G. Awan, 2013), was said that these sustainable development principles will have an impact on traditional legal principles, which must adapt to advances in science and technology that add new dimensions to the legal aspects of the development process. The development offers new conditions and values that will influence old values, both economically and socially, necessitating an adjustment process to new needs.

Following the 1972 Stockholm Conference, great progress was made in the development of national development in the framework of attempts to conserve the environment through the construction of national legislative instruments in the environmental sector (Pallemmaerts, 2014). This may be observed in the 1982 UUPLH, which was later superseded by the 1997 UUPLH. One of the elements supporting or underpinning changes to environmental law is the community's understanding and life in connection to environmental management, which has seen such development, such that reforms are required, to realize the goal of environmentally sustainable development (Wibisana, 2013). In light of the normative framework in the 1982 UUPLH, sustainable development has not been regulated and has not been recognized normatively within the Indonesian positive legal framework - the paradigm in the 1982 UUPLH is still based on patterns of environmental development that do not take into account the next generation. The concept is restricted to the sustainability paradigm, which means that development harmony in one area can affect development harmony in other sectors.

Unlike the case with the 1997 UUPLH which has adopted sustainable development in a normative framework by defining it in article 1 paragraph (2): Sustainable development with an environmental perspective is a conscious and planned effort that integrates the environment, including resources, into the development process to guarantee the capabilities, welfare and quality of life of present and future generations - and makes it a principle of implementation as written in Article 3: Environmental management carried out with the principles of state responsibility, the principle of sustainability and the principle of benefit aims to realize sustainable development with an environmental perspective in the framework of the complete development of Indonesian people and the development of the entire Indonesian society who have faith and devotion to God Almighty).

Table 1.

(handled by the author on their own)

Principles in the UUPLH 1982	Principles in the UUPLH 1997
Environmental management is based on the preservation of environmental capabilities in a harmonious and balanced manner to support sustainable development to improve human welfare.	Environmental management which is carried out under the principles of state responsibility, the principle of sustainability, and the principle of benefits aims to realize sustainable development with an environmental perspective in the context of the development of the Indonesian people as a whole and the development of the entire Indonesian people who believe in and fear God Almighty.

In this paper, the author presents opinions on the background to the translation of the concept of sustainable development into Indonesian law which is divided into global and national political factors—by examining the nature of sustainable development and several existing global and national agendas: is global politics fueled by consciousness In the early 1990s, the vibrant worldwide Environment, environmental issues became an increasing worldwide concern.

Events such as the 1992 United Nations Conference on Environment and Development (Earth Summit) in Rio de Janeiro, as well as international agreements such as the UN Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD), highlight the importance of environmental protection and life management. This also drives Indonesia to pass legislation that complies with international obligations and global environmental standards. The national political component comes next: Indonesia saw enormous political changes in the 1990s. Society and the growing powerful environmental movement put pressure on the New Order regime, which governed for decades. Environmental activists and public demonstrations express worries about the environmental damage caused by unsustainable development. These political considerations promote changes in environmental policy and legislation. Human rights concerns were a major motivator for the legislative amendment (Fauzia et al., 2021).

Environmental challenges are inextricably linked to human rights protection. The right to live in a clean and healthy environment is universally accepted (Hamdani et al., 2022). During this time, the human rights movement in Indonesia gained stronger as well. The creation of UUPLH is consistent with the notion of environmental human rights protection. Domestic developments, according to Bouchier and Hadiz, were also important the New Order administration received harsh criticism as a result of societal shifts. According to Bouchier and Hadiz, society in the 1990s altered considerably as a result of economic prosperity and increasing education. Public awareness of the dysfunctional government and socioeconomic crises related to elite corruption is growing. Several of these elements then caused the legal context for human rights to shift dramatically, from being so sensitive-exclusive to being participatory-inclusive. These changes are also tied to the necessity to govern and manage the consequences of Indonesia's fast economic expansion. Industrialization and the extraction of natural resources put further strain on the environment. This law highlights the need to guarantee that economic progress is accompanied by environmental conservation and long-term development.

Following reform and the transition from the New Order to democracy, environmental policies were transformed through the amendment of the 1997 UUPLH to the 2009 PPLH Law for numerous reasons: Policy Development and Environmental circumstances, the primary rationale for the repeal of Law Number 23 of 1997 was to accommodate policy development and more complicated environmental circumstances. To handle more contemporary environmental concerns and issues, more and more comprehensive legislation is required. Focus on Environmental Protection: The change in the name of the law from "Environmental Management" to "Environmental Protection and Management" indicates greater emphasis on the protection aspect. Law Number 32 of 2009 places greater emphasis on efforts to protect and preserve the environment (D'Hondt, 2019). Increased Responsibilities and Obligations: Law Number 32 of 2009 strengthens the responsibilities and obligations of the government, society, and various related parties in environmental protection and management. The new law provides a stronger legal basis for implementing protective measures and maintaining environmental sustainability. Expansion of Scope: Law Number 32 of 2009 also expands the scope of environmental regulations. This encompasses broader frameworks for natural resource management, pollution control, ecosystem conservation, and the environmental effect of commercial operations (Kurniawan et al., 2020). Harmonization with International Regulations: The repeal of Law Number 23 of 1997 and its replacement with Law Number 32 of 2009 also aims to update and unify Indonesian environmental rules with relevant international standards. As a result, Indonesia will be able to meet its international commitments and duties in terms of environmental preservation and management (Erwin, 2015).

There are several reasons in terms of updating environmental policies that do not always address all environmental concerns; rather, new variations provide more difficulties; One such

difficulty is dealing with mining issues that existed before the UUPPLH's promulgation. Several national environmental issues have been recorded that are of strategic concern, starting from the Lapindo Brantas Hot Mudflow in East Java (2006), forest and land fires in Riau (2003-to-present), pollution in Buyat Bay, North Sulawesi by PT Newmont Minahasa Raya (2004), forest and land fires in West Kalimantan (2005), illegal logging in Kalimantan, pollution of the Surabaya River (1995-2005), conversion of Forest Preserve into urban areas in Riau (2007), forest destruction in Kalimantan East (2004-2008), which according to the results of research conducted by the Forum for the Environment (WALHI) in 2008, was the peak of environmental damage in East Kalimantan, and several other environmental cases. It is necessary to reevaluate the policy response provided by the UUPPLH to determine if the paradigms and visions included within are correctly realized or, conversely, whether they are contradictory to the intent behind their creation. It will reflect on and dissect the UUPPLH's contents in light of this, focusing in particular on its problematic offensive against the mining industry.

In the framework of UUPPLH, several environmental law concepts serve as the cornerstones of environmental management in the mining industry (Rosmala et al., 2023). Some of these legal concepts are inextricably linked to attempts to reduce environmental contamination and harm caused by mining operations. The following concepts of environmental law are described in the context of environmental management in Indonesia, such as:

a. Principles of sustainable development with an environmental perspective

In essence, the idea of sustainable development from an environmental viewpoint expresses the meaning that is full of aspirations to incorporate the environment into the development process to ensure the capacity, welfare, and quality of life of current and future generations. This notion is the intellectual underpinning of national growth, even though reality demonstrates that the severity of environmental pollution and devastation as a result of mining area designation will continue to occur, endangering people's lives and the environment itself (Lessenich, 2019). From a legal standpoint, the principle of sustainable development from an environmental perspective is a deliberate and planned effort that incorporates the environment, including resources, into the process of determining mining areas to ensure the capabilities, welfare, and quality of life of current and future generations (Lessenich, 2019). Environmental management is also carried out by the principles of state accountability, sustainability, and benefits to achieve sustainable development from an environmental perspective within the context of the development of the entire Indonesian human being and the development of a whole Indonesian society that respects and fears God Almighty (Manafi et al., 2009). According to these guidelines, Emil Salim provides the following definition of development and the environment (Mao et al., 2022): *“Environmental elements are dissolved in development. Environmental elements are not seen as separate from development as sugar is separated from tea, but the environment is dissolved in sustainable development like sugar dissolves in sweet tea”*. In light of this, the philosophy of environment and development is related to the application of the principles of sustainable development from an environmental perspective, and it also prioritizes aspects of the welfare and quality of life of the present and future generations in addition to paying attention to the carrying capacity of the environment in sustaining human life and other forms of life. It is undeniable that the negative impact of mining activities, particularly in determining the mining business permit area, is the emergence of environmental pollution and damage, even though legal instruments such as UUPPLH have been enacted as a preventive and repressive effort towards environmental sustainability from threats and disturbances carried out by the community or other actors. the mining industry in carrying out its economic tasks. As a result, the establishment of a legal instrument in the form of UUPPLH is projected to reduce ecological risks associated with development effects that fail to include components or features of environmental sustainability. Aside from that, it must be accompanied by genuine efforts on

the part of the state to enforce the law against environmental business actors who cause environmental pollution and damage (Puspitasari, 2001).

b. Principles of Preserving Environmental Functions

From a theoretical-legal standpoint, the country's industrial businesses bear the burden of maintaining sustainability and preventing environmental contamination from mining activities. In light of the dynamics of industrial companies' operations today, theoretically and idealistically, the legal principles of environmental preservation should still be employed as a basis for industrial businesses' commitment to actualizing their economic activities (Silalahi, 2001). Considering it in terms of the concept of safeguarding environmental functions, it is a legal tool that the country's commercial players cannot disregard (Nnorom & Osibanjo, 2008). In other words, the legal principle of protecting environmental functions includes several essential elements that might reduce pollution caused by domestic industrial waste. As a result, it is recognized that the operations of industrial corporations might pollute the environment. Hence, the trash it generates is seen as a severe threat to the existence of society and the environment (Akib, 2012). Due to the weakening of business actors' commitment to the preservation of environmental functions when engaging in their economic activities, the actualization of the principle of preserving the function of the environment essentially entails stopping the environment from being polluted or damaged.

c. Principles of Compensation for Environmental Pollution Damages

Another environmental law principle that can be used as a preventive strategy in selecting mining sites is the principle of compensation (Armah et al., 2011). The provisions of Article 87 paragraph (1) - (4) UUPPLH provide the legal foundation for the notion of compensation for pollution caused by mining activities. These normative regulations implement a notion in environmental law known as the polluter pays principle. In addition to being required to pay compensation, polluters and/or environmental destroyers as a result of mining activities may be ordered by a judge to take certain legal actions, such as installing or repairing a waste management unit so that the waste conforms to the specified environmental quality standards; restoring environmental functions; and eliminating or destroying the causes of environmental pollution and/or destruction. The imposition of forced payments (*dwangsom*) for each day that a court order to do specified tasks is not carried out is for the sake of sustaining environmental functions (Najicha et al., 2022). This compensation principle can be used to ask mining companies suspected of polluting or destroying the environment to fulfill their obligations to pay compensation, either through court processes (litigation) or outside of court (non-litigation), by legal procedures for resolving cases. UUPPLH outlines environmental pollution. Thus, based on the overall elaboration of the legal principles of sustainable development from the perspective of the UUPPLH, it can be concluded that these principles constitute all the principles of environmental law which theoretically or practically can be utilized to hold legal accountability to mining companies that have failed to prevent the emergence of industrial waste pollution which causes environmental pollution. The principle of sustainable development with an environmental perspective and the principle of preserving environmental functions is a fundamental principle in preventing environmental pollution (Syapriallah, 2018). Even though the principle of compensation emphasizes repressive legal actions, in essence, it becomes a legal instrument for business actors to prevent pollution of the environment, so that, in the end, the preservation of environmental functions within the framework of sustainable development can truly be enjoyed by present and future generations.

Development of the Legal Concept of Environmental Administration in the Field of Environmental Management Supervision in Realizing Sustainable Development (*Ius Constituendum*) in Determining Mining Areas

The environment and natural resources are regarded as the most significant "capital" for

development (Gaines, 2003). The essence of development, which serves as a way of attaining human happiness, should be used as a tool to achieve a decent and healthy environment. However, in reality, development exploits nature as a means of satisfaction in reaching sectoral expansion and wealth, therefore it is not surprising that various types of pollution and environmental harm arise on this planet as a result of the determination of mining regions (Rosana, 2018).

Sustainable development's goals and core purpose are nothing more than efforts to synchronize, integrate, and give equal weight to the three main areas of development, namely economic, socio-cultural, and environmental factors (Fadli et al., 2016). The premise is that economic, socio-cultural, and environmental growth must be viewed as inextricably linked, and so the aspects of this interconnected wholeness must not be divided or opposed to one another. *Developmentalism* that stresses economic growth and progress must be abandoned in favor of a more holistic and integrative development strategy that promotes socio-cultural and environmental development (Wati, 2018). This is because the sociocultural and environmental costs of the economic development made thus far have been quite high. The state and society have paid a high price for socio-cultural and environmental degradation, not just in terms of monetary worth but also in terms of destruction. As a result, to address Indonesia's development-related circumstances and issues, particularly those relating to the mining industry and the selection of mining regions, new developments in the field of environmental management rules are needed to remove pollution and devastation (Pinilih, 2020).

To address these issues, this article proposes the development of the concept of environmental administrative law, particularly in the field of legal and policy supervision over the determination of mining areas, as part of the national legal development agenda in the environmental sector. Law, when seen in connection to the fundamental framework of national development, has two sides. On the one hand, the legislation appears to be a tool for national growth. The development of the idea of environmental administration legislation in environmental management monitoring based on UUPPLH is the creation of various things that require change or development in a more advanced (progressive) path that is not fixed on conservative thinking.

The following are the developments of ideas connected to the legal content of environmental administration in the context of environmental management supervision based on UUPPLH alluded to in this paper:

a. Institutional Development in Environmental Management in the Supervision Process for Mining Area Determination

The need for institutional existence in the oversight of environmental management cannot be disputed. It is also possible to assert that "the current administrative and institutional framework" has a role in the effectiveness of environmental legislation (Leslie & Ratukalou, 2002). Institutions that oversee environmental management are a crucial component of the entire environmental management system and the cornerstone of environmental administrative law in the formulation of environmental policy (Kc et al., 2011). In addition to performing real environmental management administration tasks, the environmental management oversight institution is empowered with the jurisdiction to develop administrative rules and carry out administrative enforcement of them. The regulatory formulation regarding Environmental Management Authority is outlined in the provisions of Chapter IV UUPLH 1997 Articles 8-13. About national environmental management institutions, this is reflected in Articles 9 and 11 of the 1997 UUPLH. The substance of the provisions of Article 9 of the 1997 UUPLH reveals that national environmental management is carried out in an integrated manner by government agencies by their respective duties and responsibilities and is coordinated by the Minister.

According to the rules of Article 9 of the 1997 UUPLH, the article's organization is

generally inconsistent and adds the meaning of the phrase integrated with each or coordination: Integration necessitates the unity of authority (institutional), whereas coordination denotes a cooperative connection in the application of sectoral authority (Shen & Gunson, 2006). The substance of the provisions of Article 11 of the 1997 UUPPLH aligns the term integrated with coordination in national-level environmental management which is institutionally carried out by a Minister. Likewise, the UUPPLH also aligns integration and coordination, this can be traced in Article 63 paragraph (2) of the UUPPLH which states that " The environmental information system is carried out in an integrated and coordinated manner and must be published to the public. According to Article 1 Number 39 UUPPLH, the Minister in question is the minister who carries out government affairs in the field of environmental protection and management).

Based on the description of the duties and authorities of environmental management institutions in determining mining areas, the development of the concept in question relates to the MENLH Institutional Organizational Restructuring. As long as there is no institutional organizational restructuring of the MENLH into a Departmental Institution, it is not possible for the formulation of the said authority of the MENLH to work properly. Therefore, to create a good and integrated environmental management oversight institution, it is important to have the Minister of Environment and Spatial Planning who leads the Department of Environment and Spatial Planning with full authority. An understanding of the meaning of environmental management authority in an integrated manner requires integrated authority, meaning that it is in one hand.

Thus, the authority of the national environmental management oversight institution, particularly in terms of determining mining areas, is in the hands of a Minister who, for the sake of integrated environmental management, has full authority to stipulate environmental policies while also having the authority to make administrative decisions (*beschikking*) regarding activities that may have a negative impact on the environment. It is believed that having a large number of government organizations with authority over environmental management makes it more difficult to control pollution and environmental damage. For this reason, it is necessary to have an institution with full authority in environmental management, including controlling pollution and environmental damage. As a result, it was initially thought that the Department of Environment and Spatial Planning's opening would be largely dependent on the procedures taken to include Bapedal in the MENLH's organizational structure.

b. Development of the Concept of Integrated Monitoring Policy in Environmental Management in Determining Mining Areas

Administrative environmental law enforcement in the framework of environmental management based on UUPPLH can be done in one of two ways: preventative or repressive. Enforcement of preventive administrative environmental laws is carried out through monitoring, whereas enforcement of repressive laws is carried out by the imposition of administrative sanctions. To ensure public conformity with administrative environmental law requirements, supervision and the imposition of administrative punishments are used. The concept of environmental management supervision policy regarding the selection of mining areas within the context of UUPPLH requires thorough regulation, which includes self-monitoring, self-recording, and self-reporting by reporting the outcomes to the relevant agencies, and is accessible to the community; If the licensing agency's inspectors are unable to fulfill their supervisory duties, a provincial or central government body will step in to provide secondary oversight.

External or public supervision is another type of supervision. Thus, to implement environmental management based on sustainable development, the notion of public supervision must be transparent and as inclusive as possible, especially by establishing an administrative objection mechanism if the agency granting the permit disregards the licensing process and public input. Naturally, a suitable punishment plan (*sanctioning strategy*) is required to provide

effective monitoring, ranging from the use of the mildest administrative sanctions (warnings one, two, and three) to the cancellation of licenses. To prevent applying punishments based only on arbitrariness, this sanctioning technique is necessary.

Legally and normatively, supervision in the context of the provisions of Articles 22-24 of the 1997 UUPPLH does not reflect the concept of comprehensive supervision, bearing in mind that the supervision carried out by the MENLH as regulated in Article 22 does not apply to all types of environmental permits, particularly in terms of determining mining areas. The oversight related to the Minister of Environment is restricted to licenses for garbage disposal in environmental media. This is because the MENLH's institutional position as a non-departmental State Ministry creates an institutional barrier to performing environmental monitoring. The supervision as stipulated in Article 22 cannot be realized by the MENLH including in the regions because of the MENLH's organizational obstacles and also because an integrated institutional arrangement has not been issued.

Meanwhile, the provisions of Article 23 states: “ (Environmental impact control as a monitoring tool is carried out by an institution specifically formed for this purpose by the government). The language of article 23 appears to be incorrect from the standpoint of environmental administration because managing environmental impacts is not a monitoring instrument, but rather an "effort" or "activity" to avoid and mitigate environmental consequences. It appears that the UUPPLH's substance has likewise failed to become an alternative for integrated supervision. The presence of regulation in Chapter XII demonstrates that the most recent law seeks integrated collaboration at all levels of government. The author of the supervision rule, it is believed, did not demonstrate the existence of the MENLH's duty since the authorized official might delegate his responsibility in carrying out supervision. The term delegation indicates that the authority assigned to the delegates becomes their responsibility, not the delegators.

The development of the notion of environmental administration legislation and the selection of mining regions are therefore incorporated in the alternative concept the authors suggest in this study. If the Minister of Environment and Spatial Planning, Governors, Regents/Mayors at the regional level adopt the idea of integrated supervision, the notion of excellent supervision in environmental management in realizing sustainable development would be effective. The idea of integrated supervision includes both private and public supervision, as well as self-monitoring, self-reporting, and recording. Accordingly, appropriate supervision that prioritizes integration across lines will stop violations of environmental administration regulatory standards. It is possible to prevent environmental damage brought on by infractions if this monitoring idea is implemented properly.

Licensing Model for Integrated Spatial Planning and Environment in Supervision of Environmental Management with an Environmental Insight

The degree of thoroughness of the permit requirements reflects the functional significance of environmental permits and spatial planning in the context of monitoring environmental management based on the realization of sustainable development as an effort to control environmental pollution and destruction caused by the determination of mining areas. Since environmental licensing requirements are how environmental contamination may be prevented and a company's environmental management performance can be evaluated, environmental licensing instruments have significant relevance. Environmental licensing standards are divided into categories to accommodate all types of fundamental protection components, which in this case comprise the following criteria (Suprihanto & Putri, 2021):

- a. Standard Condition;
- b. Limit Condition;
- c. Operating Condition;

- d. Monitoring Condition;
- e. Reporting Condition.

The above-mentioned licensing requirements idea is part of the substance of Indonesia's current environmental and spatial planning licensing system's evolution toward integrated environmental licensing. The integrated environmental licensing system has emerged as a trend in the development of environmental administration legislation, particularly in the sphere of environmental management oversight. The notion of condensing several forms of environmental licensing into a single integrated environmental licensing formula is realized by updating and creating new environmental laws and regulations to meet the "integrated environmental licensing system". There are indisputable international trends that influence the dynamics of environmental management arrangements that the UUPPLH drafters are not following or even aware of. The rising complexity of environmental and spatial planning permits appears not to have been addressed by the adoption of UUPPLH. UUPPLH solely depends on the current situation and does not implement environmental permit improvements. Even a close examination reveals that the UUPPLH gives validity to many forms of environmental licenses in Indonesia.

It is acknowledged that the formulation of the provisions mentioned above in the supervision of mining, particularly in the determination of mining areas that integrate an "integrated" system in the perspective of environmental permits, only confirms the need for "integrated policies" and does not reflect the fundamental concept of supervision of integrated environmental management, which requires "unification of" regulation (law) and administrative structure (authority and institutions). If one digs a little deeper, one will see that the UUPPLH uses a lot of verbiages that, of course, has nothing to do with the theoretical underpinnings of "supervision of integrated environmental management" (Silalahi, 2001).

In the meanwhile, it is desired to build integration between "policies" and "institutions" in the fundamental framework of integrated environmental management supervision in the context of sustainable development as it relates to selecting mining zones. Sustainable development may be harmed by sectoral environmental management. This obviously contradicts the views of A.J. Hoekema which states supervision of integrated environmental management indicates excellent, effective, and legal government activities (*behoorlijk, effectief en legitem bestuurshandelen*) (Indrastuti et al., 2022). According to this point of view, environmental pollution control in the context of monitoring environmental management comprehensively necessitates "integrity": policies, regulations, competencies, and institutions in the field of environmental pollution control, so that environmental pollution control can be carried out to ensure good, clean, and healthy sustainability. well-written, valid, and effective (Puspitasari, 2001). The crystallization and internalization of the idea of integrated environmental management provide a foundation for investigating the chain of legislative structures that support attempts to reduce environmental pollution in Indonesia.

In comparison, a complete or integrated licensing structure in the Netherlands might be proposed for the environmental licensing system and spatial planning as a legal instrument for avoiding environmental pollution and damage. In its development, sectoral environmental licensing regulations in the Netherlands have changed to become integrated and comprehensive regulations. This effort was then realized by inviting Wet Milieubeheer, Stb. 1992 Number 551, which came into effect on March 1, 1993 (Rangkuti, 2020). The transition of the Netherlands' environmental licensing system from sectoral to integrated and comprehensive licensing is a significant shift in the context of integrating multiple forms of environmental licenses into one type of "integrated environmental permit". The realization of integrated environmental licensing and spatial planning in the Netherlands is a process of deregulation and modernization carried out through the renewal of "environmental legislation": Wet Milieubeheer, has simplified environmental licensing in a harmonious manner within an environmental management legal

framework that is easy to implement and enforce (Wahid & SH, 2016). Controlling the formation of environmental pollution and harm is anchored in a single form of environmental licensing, known as "an integrated environmental licensing system". Comparing the legal systems of Indonesia and the Netherlands in terms of environmental permits and spatial planning, it is determined that Indonesia needs to pass a Law of Environmental Management right away that is thorough and governs the "integrated environmental licensing system" due to the success of environmental management based on sustainable development. The essence of the regulation governs the installation (enrichment, installation, establishment, or plant) that requires a permit as a tool for controlling pollution and environmental harm, and its key features should govern (Chang & Wang, 2010):

- a. Environmental licensing system for installations that cover all types of environmental pollution; Authority to determine ambient, effluent, and production process quality standards for all types of environmental pollution;
- b. Licensing procedures, including community participation and access to information;
- c. Provisions regarding administrative law protection, and
- d. Provisions regarding supervision/monitoring and enforcement of administrative and criminal environmental laws (Rangkuti, 2020).

Thus, to realize supervision of environmental management based on sustainable development as a means to maintain the preservation of environmental functions that can be enjoyed by present and future generations, in the context of environmental and spatial planning licensing it is necessary to (undoubtedly) carry out reforms in sectoral environmental licensing towards an integrated environmental licensing system (Basri, 2013). Otherwise, it should be time for the Decentralization and Integration of Environmental Licensing to be directed at the concept of integrated environmental licensing. The term "integrated environmental licensing" refers to a concept that combines the management of environmental and spatial planning permits, such as HO permits, liquid waste disposal permits, wastewater discharge permits to land, B3 waste management permits, damping permits, and others. If environmental (protection) permission is available, it can take the place of an "out-of-date" HO permit.

If an environmental permit is to be used as an instrument of control, its status as the ultimate permission for a mining economic activity must also be confirmed. In the Netherlands, the concept of equality of status applies to all licenses, and if one of them is canceled, the activity in question can no longer function automatically since the permission is no longer complete. This is known as the "*specialiteit beginsel*" concept. Aside from that, aspects of transparency, participation, and accountability in the process of making and post-permit issuance must be explained in detail and firmly about other development aspects related to the development of environmental permits and integrated spatial planning. These strategies can be implemented through strengthening environmental law, in this example the UUPPLH, which was initially sectoral and is moving toward unification as part of the Netherlands' environmental licensing reform (Pambudi, 2016). Integrated environmental permit, meaning that there is only one type of environmental permit. Through the implementation of this integrated environmental licensing approach, permits are expected to serve as an effective tool for reducing pollution and environmental harm. As a result, implementing the notion of integrated environmental licensing necessitates new ways of thinking about environmental management organizations and agencies.

The legislative criteria pertaining to the determination of mining areas under integrated environmental licensing are subject to the jurisdiction of the Minister of Environment and Spatial Planning, Governors, and Regents/Mayors. This authority might be decided by the "geographical-ecological", "economic", or "administrative" requirements of each installation operation. Calculation of installation activities and environmental management bureaucracy based on "geographical-ecological", "economical", as well as "administrative" considerations is

not easy. A commitment, carefulness, and maturity of the ranks of government officials both at the central and regional levels is needed in establishing integrated environmental licensing authority which is of course in line with the commitment to regional autonomy and in the framework of realizing environmental management based on sustainable development.

CONCLUSION

It is required to comply with and fulfill the requirements of the normative principles of environmental management supervision in the legal principles of environmental administration, particularly in the field of mining, in the supervision of environmental management based on sustainable development, which includes: a). The substance of environmental management policy; b). Environmental management institutions; and c). Community participation. Development of Environmental Administration Law Concepts in Environmental Management, Especially in the Field of Environmental Management Monitoring Towards Sustainable Development (*ius constituendum*). The development of the concept of staging mining areas in integrated environmental licensing is part of the development of the concept of integrated environmental management supervision policy which contains principles or principles of environmental administration law, which in this case includes the substance of the environmental management supervision policy in the field of integrated environmental licensing, people participation and integrated environmental monitoring institutions.

REFERENCES

- Agboola, O., Babatunde, D. E., Fayomi, O. S. I., Sadiku, E. R., Popoola, P., Moropeng, L., Yahaya, A., & Mamudu, O. A. (2020). A review on the impact of mining operation: Monitoring, assessment and management. *Results in Engineering*, 8, 100181.
- Akib, M. (2012). *Politik Hukum Lingkungan: Dinamika dan Refleksinya dalam Produk Hukum Otonomi Daerah*. Rajawali Press.
- Armah, F. A., Obiri, S., Yawson, D. O., Afrifa, E. K. A., Yengoh, G. T., Olsson, J. A., & Odoi, J. O. (2011). Assessment of legal framework for corporate environmental behaviour and perceptions of residents in mining communities in Ghana. *Journal of Environmental Planning and Management*, 54(2), 193–209.
- Awan, A. G. (2013). Relationship between environment and sustainable economic development: A theoretical approach to environmental problems. *International Journal of Asian Social Science*, 3(3), 741–761.
- Awan, U. (2022). Industrial ecology in support of sustainable development goals. In *Responsible consumption and production* (pp. 370–380). Springer.
- Basri. (2013). Penataan dan Pengelolaan Wilayah Kelautan dalam Perspektif Otonomi Daerah dan Pembangunan Berkelanjutan. *Jurnal Perspektif*, 18(3), 180–187.
- Carson, R. (2000). *Silent Spring*. Penguin Classics.
- Chang, Y.-C., & Wang, N. (2010). Environmental regulations and emissions trading in China. *Energy Policy*, 38(7), 3356–3364.
- D'Hondt, L. Y. (2019). Addressing Industrial Pollution in Indonesia: The Nexus Between Regulation and Redress Seeking. *Diss. PhD Dissertation*.
- Erwin, M. (2015). *Hukum Lingkungan: Dalam Sistem Perlindungan dan Pengelolaan Lingkungan Hidup di Indonesia*. Refika Aditama.

- Fadli, M., Mukhlis, & Lutfi, M. (2016). *Hukum dan Kebijakan Lingkungan*. UB Press.
- Fauzia, A., Hamdani, F., & Octavia, D. G. R. (2021). The Revitalization of the Indonesian Legal System in the Order of Realizing the Ideal State Law. *Progressive Law Review*, 3(1), 12–25. <https://doi.org/10.36448/plr.v3i01.46>
- FIKRI HADIN, A. (2021). *Sustainable Development Coal Mining Management (Case Study of Coal Mining Licensing Problem in South Kalimantan, Indonesia)*.
- Fitri, M., & Zahar, W. (2019). Kebijakan sektor industri pertambangan indonesia dalam revolusi industri 4.0. *Prosiding Temu Profesi Tahunan PERHAPI*, 1(1), 833–846.
- Fristikawati, Y., Alvander, R., & Wibowo, V. (2022). Pengaturan dan Penerapan Sustainable Development pada Pembangunan Ibukota Negara Nusantara. *Jurnal Komunitas Yustisia*, 5(2), 739–749.
- Gaines, S. E. (2003). Reflexive Law as a Legal Paradigm for Sustainable Development. *Buffalo Environmental Law Journal*, 10(1), 1–24.
- Grewal, D. S., & Purdy, J. (2014). Introduction: Law and neoliberalism. *Law & Contemp. Probs.*, 77, 1.
- Hamdani, F., Fauzia, A., Putra, E. A. M., Walini, E. L., Pambudi, B. A., & Akbariman, L. N. (2022). Persoalan Lingkungan Hidup dalam UU Cipta Kerja dan Arah Perbaikannya Pasca Putusan MK Nomor 91/PUU-XVIII/2020. *Jurnal Indonesia Berdaya*, 3(4), 977–986.
- Heinhard, S. (1980). *The Fundamental Right to a Decent Environment in Trends in Environmental Policy and Law*. IUCN, Gland.
- Holden, E., Linnerud, K., & Banister, D. (2014). Sustainable development: Our common future revisited. *Global Environmental Change*, 26, 130–139.
- Indrastuti, L., Ellectrananda, A. A., & Rahmat, D. (2022). Administrative Environmental Law Enforcement Based On Transcendental Post Covid-19 Pandemic. *Journal of Positive School Psychology*, 9973–9979.
- Ishak. (2007). Penentuan Pemanfaatan Lahan Kajian Land Use Planning dalam Pemanfaatan Lahan untuk Pertanian. *Makalah*.
- Jamaludin, A. N. (2016). *Sosiologi pembangunan*. Pustaka Setia.
- Kc, A., Ea, E., Mallo, J., & Wazoh, H. (2011). Artisanal Mining of Cassiterite: The Sub-Surface (Loto) Approach, Sheet 390, Rayfield Jos, Nigeria. *Wilolud Journals*, 5(2), 38–50.
- Kurniawan, A. R., Murayama, T., & Nishikizawa, S. (2020). A Qualitative Content Analysis of Environmental Impact Assessment in Indonesia: A Case Study of Nickel Smelter Processing. *Impact Assessment and Project Appraisal*, 38(3), 1–11.
- Leslie, D., & Ratukalou, I. (2002). *REVIEW OF RURAL LAND USE IN FIJI*.
- Lessenich, S. (2019). *Living well at Others' expense: the hidden costs of Western prosperity*. John Wiley & Sons.
- Litvinenko, V. S. (2020). Digital economy as a factor in the technological development of the mineral sector. *Natural Resources Research*, 29(3), 1521–1541.
- Lummert, R. (1980). *Change in Civil Liability Concept in Trends in Environmental Policy and Law*. IUCN, Gland.
- Manafi, M. R., Fahrudin, A., Bengen, D. G., & Boer, M. (2009). Aplikasi Konsep Daya Dukung untuk Pembangunan Berkelanjutan di Pulau Kecil (Studi Kasus Gugus Pulau Kaledupa, Kabupaten Wakatobi). *Jurnal Ilmu-Ilmu Perairan Dan Perikanan Indonesia*, 16(1), 63–71.
- Mao, Q., Hu, B., Agathokleous, E., Wang, L., Koike, T., Ma, M., & Rennenberg, H. (2022). Biochar application improves karstic lime soil physicochemical properties and enzymes activity and enhances sweet tea seedlings physiological performance. *Science of the Total Environment*, 830, 154815.

- Mina, R. (2016). Desentralisasi Perlindungan dan Pengelolaan Lingkungan Hidup sebagai Alternatif menyelesaikan Permasalahan Lingkungan Hidup. *Jurnal Arena Hukum*, 9(2), 149–165.
- Morrison, T. H., Wilson, C., & Bell, M. (2012). The role of private corporations in regional planning and development: opportunities and challenges for the governance of housing and land use. *Journal of Rural Studies*, 28(4), 478–489.
- Mukhlis. (2010). Konsep Hukum Administrasi Lingkungan dalam Mewujudkan Pembangunan Berkelanjutan. *Jurnal Konstitusi*, 7(2), 67–98. <https://doi.org/10.31078/jk724>
- Muta'ali, L., Marwast, D., & Christanto, J. (2018). *Pengelolaan wilayah perbatasan NKRI*. UGM PRESS.
- Najicha, F. U., Karjoko, L., Rachmi, I. G. A. K. R., Chandrakirana, R., & Tenrilawa, D. F. (2022). The Conceptualization of Environmental Administration Law in Environmental Pollution Control. *Journal of Human Rights, Culture and Legal System*, 2(2), 87–99.
- Nnorom, I. C., & Osibanjo, O. (2008). Overview of electronic waste (e-waste) management practices and legislations, and their poor applications in the developing countries. *Resources, Conservation and Recycling*, 52(6), 843–858.
- Pallemaerts, M. (2014). International environmental law from Stockholm to Rio: back to the future? In *Greening International Law* (pp. 1–19). Routledge.
- Pambudi, R. A. (2016). *Sharia cooperative as a body legal entity alternative for water commercial in Indonesia*. Universitas Islam Negeri Maulana Malik Ibrahim.
- Pinilih, S. A. G. (2020). The Green Constitution Concept in the 1945 Constitution of The Republic of Indonesia. *Mimbar Hukum*, 30(1), 202–213.
- Priyanta, M. (2015). Pembaharuan dan Harmonisasi Peraturan Perundang-undangan Bidang Lingkungan dan Penataan Ruang Menuju Pembangunan Berkelanjutan. *Hasanuddin Law Riview*, 1(3), 337–349.
- Puspitasari, S. H. (2001). Pembangunan, Risiko Ekologis dan Perspektif Jender. In E. Rajagukguk & R. Khairandy (Eds.), *Hukum dan Lingkungan Hidup Indonesia*. Program Pascasarjana Fakultas Hukum Universitas Indonesia.
- Rangkuti, S. S. (2020). *Hukum Lingkungan & Kebijaksanaan Ling Nasional Ed 4*. Airlangga University Press.
- Redi, A. (2014). *Hukum pertambangan Indonesia: pertambangan untuk kemakmuran rakyat*. Gramata Publishing.
- Rosana, M. (2018). Kebijakan Pembangunan Berkelanjutan yang Berwawasan Lingkungan di Indonesia. *Jurnal Ilmu Sosial*, 1(1).
- Rosmala, F., Bambang, A. N., & Purnaweni, H. (2023). Design of Land Resource Management Strategy Based on Public Involvement. *Sustainability and Climate Change*, 16(5), 394–405.
- Salim, M. A. (2018). Kesiapan Pemerintah Menerapkan Green Banking Melalui Pojk Dalam Mewujudkan Pembangunan Berkelanjutan Berdasarkan Hukum Positif Di Indonesia. *Yustitia*, 4(2), 119–141.
- Shen, L., & Gunson, A. J. (2006). The role of artisanal and small-scale mining in China's economy. *Journal of Cleaner Production*, 14, 427–435. <https://doi.org/10.1016/J.JCLEPRO.2004.08.006>
- Silalahi, D. (2001). *Hukum Lingkungan dalam Sistem Penegakan Hukum Lingkungan Indonesia*. Alumni.
- Silalahi, D. (2003). Pembangunan Berkelanjutan dalam Rangka Pengelolaan (Termasuk perlindungan) Sumber Daya Alam yang Berbasis Pembangunan Sosial dan Ekonomi. *Seminar Pembangunan Hukum Nasional VIII*.
- Simmonds, N. (1981). Building a Sustainable Society. In L. R. Brown (Ed.), *Experimental*

- Agriculture* (Vol. 19, Issue 1, pp. 111–111). Norton.
<https://doi.org/10.1017/S0014479700010589>
- Springett, D., & Redclift, M. (2015). Sustainable development: History and evolution of the concept. In *Routledge international handbook of sustainable development* (pp. 3–38). Routledge.
- Suprihanto, J., & Putri, L. P. (2021). *Manajemen Sumber Daya Manusia*. UGM PRESS.
- Suranta, F. A. (2012). *Penggunaan lahan hak ulayat: dalam investasi sumber daya alam pertambangan di Indonesia*. Gramata Pub.
- Syapriallah, A. (2018). *Buku Ajar Mata Kuliah Hukum Lingkungan*. Deepublish.
- THAMRIN, H. (2023). *PENYELESAIAN TINDAK PIDANA PERTAMBANGAN EMAS TANPA IZIN MELALUI PENDEKATAN RESTORATIVE JUSTICE DALAM PERSPEKTIF PENGELOLAAN SUMBER DAYA ALAM YANG BERKEADILA*. Doktor Ilmu Hukum.
- Utama, I. M. A., & SH, M. H. (2018). *Hukum lingkungan: Sistem hukum perizinan berwawasan lingkungan*. www.tokobukuonline.com-TBO.
- Wahid, A. M. Y., & SH, M. S. (2016). *Pengantar Hukum Tata Ruang*. Prenada Media.
- Wati, E. P. (2018). Perlindungan dan Pengelolaan Lingkungan Hidup dalam Pembangunan yang Berkelanjutan. *Bina Hukum Lingkungan*, 3(1), 119–126.
<https://doi.org/10.24970/bhl.v3i1.63>
- Wibisana, A. G. (2013). Pembangunan Berkelanjutan: Status Hukum dan Pemaknaannya. *Jurnal Hukum Dan Pembangunan*, 43(1), 54–90.