




Building The Strengthening of Environmental Protection and Management In The Industrial Revolution-Era 4.0

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Abstract

Introduction: Environmental protection is no longer negotiable, in Indonesia and internationally the destruction of the environment due to mining and deforestation has reached an alarming threshold and threatens the lives of future generations. The actions that have been taken and the existence of institutions / organizations in the field of environment are not able to make a maximum contribution to environmental protection.

Purposes of the Research: The purpose of this research is to find a concept of strengthening environmental protection that is more effective and efficient and can be applied in preventing massive environmental damage both on a national and international scale and efforts to rehabilitate environmental damage that can be carried out by local communities with government support in the future, especially in the era of the industrial revolution 4.0.

Methods of the Research: This research is a qualitative research that examines legal policies (normative legal research) related to the environment. The data used is secondary data in the form of literature from the opinions of experts as well as the results of previous studies relevant to the topic of the problem. The collected data is grouped according to the stages and systematics of research and the flow of discussion then analyzed by providing explanations that are strengthened by theories from legal experts, especially in the environmental field.

Results of the Research: Strengthening environmental protection and management in the industrial era 4.0 can be done in two ways, namely: (1) strengthening the role of the community initiated and fully supported by the government by making the community a partner in environmental management (2) Institutional strengthening in environmental protection and management, namely by making customary / community institutions as one of the main elements in policies related to the environment.

1. INTRODUCTION

Humans in the nation and state life are part of the international ecosystem or the global environment that, directly or indirectly, are interconnected and influence each other in the conservation, protection, and management of the environment. Article 1 paragraph (1) of Law Number 32 of 2009 concerning Protection and Management of the Environment states: The environment is a unitary space with all objects, forces, conditions, and living things, including humans and their behavior, which affect nature itself, survival, and the welfare

of humans and other living creatures. Furthermore, an urgent role for the international community is needed as an integral part of building and preserving a sustainable living environment to build environmental sustainability.

The international community must protect and manage these environmental systems as part of the global ecosystem. What is most needed in any condition is how the ecosystem becomes stable. Therefore, people continuously live in a stable and orderly manner between the community and the community and between the community and the environment to create a balance (equality). The amount of environmental damage marks the instability of people's lives with the global environment. Deforestation, forest degradation, and land use change are considered as main source of emissions in Indonesia ¹. Based on data from the Central Bureau of Statistics (BPS) Indonesia, the logging area throughout Indonesia in 2017-2018 was 439,439.1. In 2018-2019, it was 462,458.5, and the last data for 2019-2020 was made during the Covid-19 Pandemic was 115,459.8. The Greenpeace Indonesia Forest Campaign Team Leader, Arie Rompas, said that during the administration of President Joko Widodo, the area of deforestation in the last five years had reached 2.13 million hectares (ha), or the equivalent of 3.5 times the size of the Bali island ². Based on Wahyudi's research report, the harvesting system that has been carried out has not been carried out properly and correctly³.

Large-scale environmental damage with the most recent international record in 2022, occurred in deforestation in the Brazilian Amazon Forest. Al-Jazeera media reports cited by the Media One website reported that forest destruction in Brazil had increased rapidly since 2019 when President Jair Bolsonaro officiated. Deforestation in the Brazilian Amazon reached 430 square kilometers last month, five times higher than in January 2021. According to preliminary satellite data from the Space Research Agency of Inpe Government released on Friday ⁴. In other fields, research conducted by Kuan Ken Lee et al. in 2021 concluded that an 80% increase in ambient carbon monoxide concentration that the industrial revolution increased the production of carbon monoxide concentrations that occurred in developed countries ⁵. This increase was triggered by the increasing number of large-scale industries based on fossil fuel engines. In entering the industrial era 4.0, sustainable development seems to have ignored the principle of balance (equality). Consequently, environmental damage occurs everywhere, such as water pollution, air pollution, reaching across national borders, and forest conversion, which causes damage and has negative effects on forests and the environment.

Article 1 number 16 of Law Number 32 of 2009 concerning Environmental Protection and Management explains: "Environmental damage is the act of a person causing direct or indirect changes to the environment's physical, chemical, and/or biological properties. Therefore, it exceeds the standard criteria for environmental damage".

¹ Iswanto, Dodik Ridho Nurrochmat, and Ulfah Juniarti Siregar, "Life Cycle Assessment (LCA) of Wood Pellet Production at Korintiga Hutani Company, Central Kalimantan, Indonesia," *Jurnal Manajemen Hutan Tropika* 27, no. 3 (2021): 200-207, <https://doi.org/10.7226/jtjm.27.3.200>.

² (BPS Indonesia, 2021)

³ Et.al Wahyudi, "TINGKAT KERUSAKAN TEGAKAN TINGGAL PADA AREAL BEKAS TEBANGAN DI IUPHHK-HA (Residual Trees Damage Rate at Logged Over Forest in Forest Concession Of," *Hutan Tropika* XV, no. 2 (2020): 71, <https://doi.org/10.36873/jht.v15i2.2162>.

⁴ Unggul Wirawan, "Januari, Deforestasi Di Amazon Brasil Mencapai Rekor Baru," *News One* (Jakarta, 2022), <https://www.beritasatu.com/news/890169>.

⁵ Kuan Ken Lee et al., "Short-Term Exposure to Carbon Monoxide and Myocardial Infarction: A Systematic Review and Meta-Analysis," *Environment International* 143, no. July (2020): 105901, <https://doi.org/10.1016/j.envint.2020.105901>.

The meaning contained in Article 1 is that humans should not destroy the environment in any way and do not ignore the environment because of temporary interests. There are still many generations to come who will enjoy the environment. Environmental damage is a side effect of human actions to achieve specific goals that affect the environment. Environmental pollution results from the ambiguity of human actions, so it is not surprising that environmental damage occurs everywhere.

In the Holy Qur'an Surah Ar-Ruum verse 41, Allah says: "*Dhoharol Fasaadu fil Barri wal bahri bimaa kasabat aidinnaasi liyudziiqohum ba*" *dolladzii Amiluu La'allahm Yarjiuun*"

"Meaning: Corruption has appeared on the earth (land) and in the seas because of the effects of human hands" (Ar-Ruum verse 41)

The meaning of the verse above is a warning to humans who have reason to think about the environment as their creation: nature requires a balance between humans and nature and humans. Indeed, humans must be aware of the balance between themselves and nature, not nature which must balance with humans. Balance and harmony between humans and nature will be created by themselves if humans always do justice to nature and the environment. Environmental protection and management efforts in the industrial era 4.0 will not be separated from the awareness and role of the international community in the decision-making process of a policy regarding the impacts and consequences of development effects that will be carried out to not bring negative impact on society.

Based on the results of research conducted by Kadek Cahya in 2019, one of the roles of the community in environmental activities is the supervisory space. supervision. Supervision is the participation of the community as part of the scope of administrative law enforcement that is preventive in nature. scope of administrative law enforcement which is preventive in nature, because supervision is a preventive measure to force compliance ⁶ . While Grace Pinkan in the conclusion of her research on community participation in environmental management, namely community participation in environmental management and preservation is related to the obligation to maintain environmental sustainability, in the form of social supervision, providing suggestions, proposals, objections, complaints and submitting information or reports that are very important for the success of the program to preserve environmental functions and capabilities ⁷ . Looking at the two conclusions of the research that has been done, the author can analyze that community participation in environmental management is still in the supervisory stage, while the supervisory power (Control power) of the community is very weak, because it is not supported by strong instruments that support supervisory performance. Weak supervisory power is one of the factors that determine the success of environmental conservation.

2. METHOD

This research was normative legal research or doctrinal research. This research was primarily conducted on data in the library, namely secondary data in legislation and other

⁶ Kadek Cahya Susila Wibawa, "Mengembangkan Partisipasi Masyarakat Dalam Perlindungan Dan Pengelolaan Lingkungan Hidup Untuk Pembangunan Berkelanjutan," *Administrative Law and Governance Journal* 2, no. 1 (2019): 79-92, <https://doi.org/10.14710/alj.v2i1.79-92>.

⁷ Grace Kewengian, Pinkan, "Partisipasi Masyarakat Dalam Pengelolaan Dan Pelestarian Lingkungan Hidup," *Lex Et Societatis* 7, no. 5 (2019): 55-62.

legal materials⁸. The data were analyzed using a qualitative approach using theoretical instruments to generate the correct conclusions.

3. RESULTS AND DISCUSSION

3.1 Strengthening the Role of Society in Environmental Protection and Management in the Era of the Industrial Revolution 4.0

In recent decades, the harmful effects of human activities on the environment and the relationship between environmental health and human well-being have become clear. Every environmental problem is often caused by human actions starting from the local/small (rural) level, sub-district to national and international levels. Legal and illegal mining, deforestation, plantations, expansion of settlements by taking forest areas, and many other human activities cause and have the potential to damage the environment. Low environmental management because profit-oriented entrepreneurs are not environmentally oriented⁹. Walhi Sulsel reported on problems resulting from mining activities in the Bila River, Sidenreng Rappang Regency, which were carried out until 2019, where there were legal and illegal miners, and the discussion was the community's rejection of these mining activities. Communities around the Bila River have also never been involved in discussing the application or issuance of environmental permits. These activities resulted in damage to the Bila River. In addition, it has resulted in the death of five people at the mining site¹⁰. At the international level, environmental damage due to deforestation in the Amazon Forest can be found in Brazil. The government recorded the most extensive deforestation in the Amazon rainforest during January. Based on satellite data from the National Institute for Space Research, deforestation in the Amazon rainforest reached 430 sq km last month, five times higher than January 2021¹¹. The case that occurred in Brazil was caused by the weak participation of the indigenous peoples of the Geraizeirasdo Alto Rio Preto, namely the indigenous people of the Preto River, in protecting their area due to the potent power of the government of President Bolsonaro¹².

Awareness to preserve the environment has started since the international conference in Stockholm, Sweden, in 1972 (UNCHE), which made an agreement by countries to save the environment known as the Stockholm declaration, the Nairobi Kenya conference in 1982 (UNCHE), the Rio conference de Janeiro Brazil in 1992 (UNCED), the Johannesburg, South Africa conference in 2002 (WSSD), the Bali Indonesia conference in 2007 (UNFCCC), the Rio de Janeiro Brazil conference (Rio+20) in 2012 (UNCSD), and the Paris France conference in 2015 (UNFCCC) and continues to be developed to build and preserve the natural environment.

In reality, implementing environmentally sound sustainable development in Indonesia has not been appropriately implemented because many development activities

⁸ Suratman and Philips Dillah, *Metodologi Penelitian Hukum* (Bandung: Alfabeta, 2015).

⁹ Hamzah Lubis, "Relasi Pemberdayaan Dan Partisipasi Masyarakat Dengan Kerusakan Lingkungan," *Jurnal Kesehatan Masyarakat Dan Lingkungan Hidup* I, no. I (2016): 16, https://doi.org/http://e-journal.sari-mutiara.ac.id/index.php/Kesehatan_Masyarakat/article/view/145.

¹⁰ Rezki Purnama Samad, A. M. Yunus Wahid, and Hamzah Halim, "Urgensi Partisipasi Masyarakat Terhadap Izin Usaha Pertambangan Pasir," *Al-Ishlah: Jurnal Ilmiah Hukum* 24, no. 1 (2021): 143–62, <https://doi.org/10.56087/aijih.v24i1.87>.

¹¹ CNBC Indonesia, "Astaga Bolsonaro! Amazon Makin Gundul, Pembabatan Hutan Rekor," February 2022, <https://www.cnbcindonesia.com/news/20220214201729-4-315359/>.

¹² M. R. Poerwantika, T. R. Hatami, "Deforestasi Amazon Pada Era Bolsonaro," *Journal of International Relation* 5, no. 2 (2021): 190, <https://doi.org/https://doi.org/10.32787/ijir.v5i2.205>.

still ignore preserving environmental functions. Some of the developments that have great potential as causes of environmental damage and pollution, both at the national and international levels, are mining activities and forest clearing for commercial purposes to meet the needs of the development itself. The world community, in general, feels their consequences. Therefore, every business activity related to efforts to manage natural resources should pay attention to the carrying capacity of the environment for the people's welfare, both for the current generation and for generations to come¹³.

Environmental problems have started with awareness about pollution, which can occur in water and air. It is further compounded by the problem of how to protect species of animals and plants that are starting to become rare and other conditions on the whole nature, such as changes in weather or damage to the ozone layer. They begin to occur due to the rapid development in various economic activities. For example, many pesticides are used to facilitate the extermination of plant pests, ultimately negatively impacting human life¹⁴. This situation is in line with the Anthropocene concept, which was popularized by Paul J. Crutzen, a 1995 Nobel Prize laureate, as a term to emphasize the central role of human kind in geology and ecology, where human activities have fundamentally impacted the global environment and permanently destabilized the earth¹⁵. Malcom added, as quoted by Chadijah that in this period, human behavior intervention dominated climate change and ecosystems globally¹⁶. This concept explains the correlation and impact of human economic activity in the last decade, which is too exploratory, consumptive, and profit-oriented toward the earth. Therefore, it can be predicted that the earth's carrying capacity will reach zero one day. Hence, there is nothing else we can take advantage of and enjoy from the earth, especially for future generations.

Furthermore, it is undeniable that various environmental problems will cross the territory of the State, so environmental problems must be mitigated through international cooperation. One of the international agreements is to carry out development based on the principle of sustainable development, which means that development should not be selfish by always paying attention to life in the future, which of course, has needed equal to life nowadays¹⁷. Not all concepts of free trade will always bring benefits to developing countries. Free trade may benefit developed countries with a much more established legal order and system than developing countries.

The development will have a negative and a positive impact on the environment, depending on the concept and context of the planned development. The development will negatively impact the environment if it is not environmentally friendly and will not only harm the country itself but also damage the environment of other countries. Development cannot be avoided by anyone, including development in law, economy, social, political, and environmental development. However, the negative impact cannot be prevented but can be

¹³ Muhammad Sood, *Indonesian Environmental Law* (Jakarta: Sinar Grafika, 2019).

¹⁴ Oktaberina, *Upaya Perlindungan Lingkungan Hidup Dalam Era Perdagangan Bebas: Dalam Ida Susanti Dan Batu Seto Ed, Ida Susanti Dan Batu Seto Ed, Aspek Hukum Dari Perdagangan Bebas* (Bandung: Citra Aditya Bakti, 2013).

¹⁵ Rini Astuti, "Keadilan Inter-Generasi, Malapetaka Lingkungan, Dan Pemuda Di Era Antroposen," *Jurnal Studi Pemuda* 8, no. 2 (2019): 166, <https://doi.org/10.22146/studipemudaugm.48576>.

¹⁶ Siti Chadijah, "Tinjauan Abjection Dalam Penciptaan Ulang Produk: Sebuah Perspektif Menuju Periode Antroposen," *Jurnal Dimensi Seni Rupa Dan Desain* 18, no. 2 (2022): 217-30, <https://doi.org/10.25105/dim.v18i2.13001>.

¹⁷ Ida Susanti & Bayu Seto, *Aspek Hukum Perdagangan Bebas: Menelaah Kesiapan Hukum Indonesia Dalam Penyelenggaraan Perdagangan Bebas* (Bandung: Citra Aditya Bakti, 2013).

reduced, reflected in various agreements made in various countries. One of the international meetings was a meeting held in Rio known as the Rio de Janeiro conference. It was better known as the Earth Summit in 1992, which agreed on one development principle, namely sustainable development, which was Indonesianized as sustainable development or development with environmental insight as described in Article 1 point 3 of Law Number 32 of 2009 concerning Environmental Protection and Management that: "*Environmentally-minded sustainable development is a conscious and planned effort that integrates the environment, including resources, into the development process to ensure the ability, welfare, and quality of life of present and future generations.*"

Several years ago, this discussion on environmental issues was held in Bali, attended by several countries worldwide. However, the agreement taken has not been felt by all human beings in this part of the world. However, what is vital in the life of the nation and state today and the future is how to carry out the principles agreed upon by these countries so that they can be carried out with an awareness of the common need for a comfortable, clean and authoritative environment without any party controls. The principles aim to take preventive action as early as possible by each country so that development activities do not have a negative impact on the environment.

The principle of sustainable development was explicitly raised in the 1987 Brundtland Commission Report, which was defined as: *Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.* This understanding is used as a strategy to improve the quality of human life while living within the carrying capacity of the supporting ecosystem.

It has been forty-eight years since the 1972 conference in Stockholm, and the Earth Summit was held, which resulted in various international agreements, and the last one in Bali was hard law and soft law. One of these agreements is regarding various action plans to face the 21st century. Action plans in development to be in harmony and (balanced by the author's cursive) with environmental capabilities, better known as Agenda 21, also think about trade-related issues. Countries agree to provide support in achieving environmental-oriented development goals. One way to achieve this goal is: is¹⁸:

Promoting sustainable development through trade liberalization;

- 1) Making Trade and the environment mutually supportive
- 2) Providing adequate financial resources to developing countries and dealing with international debt;
- 3) Encouraging macroeconomic policies conducive to environment and development.

According to Oktaberina, this thinking is because many of the countries participating in the conference in Rio are also members of the World Trade Organization (WTO). Surely, many of their thoughts, especially developed countries, are pushing for an agreement on a trading system adopted by them at the meeting in Rio, even though the basic principle is sustainable development. ¹⁹

Entering the industrial revolution 4.0 is a challenge for the Indonesian state in protecting and managing the environment for all elements of society. To protect a clean and healthy environment as a human right, all energy used in Indonesia must use renewable

¹⁸ (Oktaberina, 2013, p. 427)

¹⁹ T. Stock and G. Seliger, "Opportunities of Sustainable Manufacturing in Industry 4.0," *Procedia CIRP* 40, no. 1 (2016): 536–41, <https://doi.org/10.1016/j.procir.2016.01.129>.

energy to keep the environment clean and healthy. The essence of the industrial revolution 4.0 is an environmentally friendly industry following the Sustainable Development Goals (SDGs).

According to Santoso, the strengthening of the community's role in the 4.0 industrial revolution era has five other benefits from the community's role:

- 1) In a policy-making process, the community as a group has the potential to bear the consequences of a policy and has the right to be consulted.
- 2) As a strategy, through community participation, a government policy will get support from the community so that the decision has credibility.
- 3) Community participation is also intended as a communication tool for the government designed to serve the community to get input and information in decision-making to create responsiveness.
- 4) Community participation in dispute resolution or conflict is utilized to reduce or defuse conflict through efforts to reach a consensus on existing opinions. This opinion assumes that exchanging ideas and views can increase understanding and tolerance and reduce distrust and confusion.

Community participation in environmental management efforts has a wide range. This participation includes not only the participation of individuals subject to various regulations or administrative decisions but also the participation of groups and organizations in society. Participation can be effective beyond the ability of individuals both from the point of view of financial capacity and from the point of view of their knowledge capacity. Thus, the participation of groups and organizations is vital.

The success or failure of development programs in the environmental field is in the government and all elements of society. It is crucial to foster attention, motivation, and appreciation among the community to participate in developing the environment.

Article 68 of Law Number 32 of 2009 states: "*Everyone who carries out a business and/or activity is obliged to provide information related to environmental protection and management in a correct, accurate, open and timely manner; maintain the sustainability of environmental functions.*"

Article 1 paragraph (2) of Law Number 32 of 2009 concerning Environmental Protection and Management states the obligations and participation of the community in the era of the industrial revolution 4.0. Besides, it is clearly described in Article 70 of Law Number 32 of 2009 concerning Environmental Protection and Management, namely:

- 1) Social surveillance
- 2) Giving suggestions, opinions, proposals, objections, complaints; and/or
- 3) Submission of information and/or reports.

The community's roles are carried out to:

- 1) Increasing awareness of environmental protection and management;
- 2) Increasing independence, community empowerment, and partnerships;
- 3) Developing the community's capabilities and pioneers;
- 4) Developing community responsiveness to carry out social supervision; and
- 5) Developing and maintaining local culture and wisdom in preserving environmental functions.

Community participation can be seen as helping state and state institutions carry out their duties more appropriately and effectively. Strong and transparent institutions must support community participation in environmental management by maximizing information systems from open technological sophistication. Therefore, people can easily convey aspirations and complaints related to environmental problems they face and feel.

Community participation in environmental protection and preservation will be more pronounced, of course, with the support of instruments that are formed and recognized by the state and have a strong effect on government policies in environmental utilization. Instruments that can immediately respond to all reactions arising from the community, study these reactions and make these community reactions as one of the factors in the formation of policies related to the environment. The level of responsiveness of the state in terms of accommodating is indeed very lacking because so far the opinions / reactions of the community are used as a barrier to their environmental policies. Traditional communities still think that the environment where they live and depend on the environment is their right and anyone outside their community has no more rights than them, even the sovereignty of the state. Because they have existed before the state organization was formed, so it is not wrong if the community defends their area with all its power then causes prolonged disputes and conflicts. In such conditions, the government or state should make the community a partner by establishing cooperation between the state and the community with the same goal of providing protection to the environment, the state as a strong organization with full sovereignty should cooperate with the community as the spearhead of environmental protection.

Partnership between the government and the community in environmental protection and preservation to face the upcoming industrial era is a new thing, which is very different from the paradigm of environmental management that has been going on so far. Where the community functions as an element of supervision in environmental management, while the supervisory authority given to the community is still external and has not been supported by strong supervisory instruments. Meanwhile, the government has a very strong and absolute role in environmental management, so that any government policy that has been determined based on statutory procedures cannot be disturbed.

The positive impact that can be obtained from these changes is to foster a sense of love for the next generation of society for the environment around them, by instilling a high sense of nationalism in their environment, besides that this partnership paradigm can reduce the emergence of conflicts caused by environmental management, as has happened in several regions in the country. Another benefit that can be generated is the improvement of the welfare of the local community by exploring the potential of existing resources in the environment, while maintaining and preserving environmental quality.

This partnership paradigm must of course be initiated and facilitated by the state, as an organization that holds the highest power with trained and experienced human resources and supported by modern technology. The state in this case is basically an implementation of the state function theory, namely Protection Function Theory, which one of the main objects in state protection is to maintain the quantity / integrity of the state's territory and maintain the quality of the territory. The state can be said to be successful in carrying out this function if it can maintain the integrity of the environmental area and maintain the quality of the environment so that it is suitable for human livelihoods and other living things.

3.2 Institutional Strengthening in Environmental Protection and Management in the Era of the Industrial Revolution 4.0

According to A.C. Pereira and F. Remero, the global industrial landscape has significantly changed in recent years due to technological developments and successive innovations. The concept of Industry 4.0 has emerged, and the academic literature has paid increasing attention to this topic that remains non-consensual or obscure. Community participation will be realized properly if law enforcement officers and bodies competent in it can grow and involve the community's role in every decision-making. In a state with a modern democratic style, people cannot be left alone in making administrative decisions that are directly related to the environment, which is likely to have a negative impact because there is no openness.²⁰

Transparency, according to Rangkuti, states that openness and community participation in the decision-making process that can have a substantial impact on the environment (primarily environmental permits) need to be formulated in laws and regulations. Community participation by a person, group of people (environmental organization), or legal entity is a consequence of "equal rights to a good and healthy environment."

The legal means of community participation are carried out in the form of the right to participate in administrative procedures, such as "*inspraak*," public hearings, public inquiries, and so on. Community participation is a legal procedure of state administration that contributes to the efficiency of the decision-making process and the quality of decisions in the environmental field. Meanwhile, the management needs to be regulated in an administrative juridical manner. Openness (*meeweten* or participate in knowing, and *meedenken* or participate in thinking) in environmental management is essential regarding the "right to environmental information." Furthermore, participation (*meedenken* or participate in thinking, *meespreken* or participate in talking, and *meebeslisen* or participate in deciding) is sustainable from "openness."

Participation (*inspraak*) can be in the form of a *bezwaren* procedure (objection procedure) before a decision is given. Clear reasons and considerations must accompany the request for refusal according to administrative law in Article 6 HO. In Article 5 and Article 10 of the *Hinder Ordonantie*, Stb 1926 No. 226, there are *inspraak* (community participation), *beroep* (administrative appeals), and procedures. However, in practice, they have never been implemented because HO is in Dutch, and law enforcement is no longer possible.

"The role as referred to in this article includes the role in the decision-making process, either by filing objections or hearings or by other means specified in the laws and regulations..."

It is necessary to have a change the order of the two existing systems to realize the role of the community in the context of environmental protection and management, namely:

a. Political System

Environmental management is an essential and global issue that the government has begun to be aware of protecting since 1982. It was evidenced by the promulgation of Law

²⁰ A. C. Pereira and F. Romero, "A Review of the Meanings and the Implications of the Industry 4.0 Concept," *Procedia Manufacturing* 13, no. January 2019 (2017): 1206-14, <https://doi.org/10.1016/j.promfg.2017.09.032>.

Number 4 of 1982 concerning Basic Provisions for environmental management, promulgated during the New Order era. The law has survived since the New Order regime came to power. Article 6, paragraphs 1 and 2 of the law state that everyone has the right and obligation to participate in environmental management.

In its development, the law was replaced by Law No. 23/1997 on environmental management. The spirit built into Law Number 23 of 1997 is extraordinary. Then Law Number 23 of 1997 was repealed by Law Number 32 of 2009 concerning Environmental Protection and Management, which provides space for the community to play an active role. Thus, it is clear that natural resource economics can be defined as a science that pays attention to planning and assessing alternative natural resource policies²¹.

The enactment of Law no. 11 of 2020 concerning Job Creation significantly impacts the environmental sector concerning environmental permits/environmental approvals. One of the changes that occurred in the Job Creation Law was the abolition of environmental permits. It is determined in article 13 of the Job Creation Law. Simplification of the basic requirements for Business Licensing, using the term environmental approval based on risk. Meanwhile, risk itself is very subjective and active. There is no standard for risk, even though the government has set low, medium, and high-risk standards. (Article 7 paragraph 7 on Job Creation Law). It is an effort to increase the level of investment, so there is a potential for overexploitation of natural resources, which will impact decreasing the quality of the environment in Indonesia²². Given the role and position of licensing as the key and entry point for all industrial activities and environmental permits as an important instrument in protecting and preserving the environment, Omnibus law should not negate environmental permits, but may provide dispensation for existing conditions or by eliminating one or several parts of the permit environment.

b. Education System and Level

The level of education with environmental awareness and the level of the community's economic welfare are very close. If the level of education is low, the awareness of the environment will be low. However, even though education is low among indigenous peoples in Indonesia, the efforts to protect and manage the environment are very high, for example, the Badui tribes of Banten and the Tenggerese indigenous peoples of Indonesia. However, if the level of education is high, then the awareness of the environment is high, but that is not necessarily the case. Higher education can damage the environment; for example, forest fires carried out by corporations are carried out by highly educated people. However, it cannot be denied that if the level of public education is high, the level of awareness and thoughts about how to preserve the environment will be higher.

Strengthening environmental protection through education can be done by including and prioritizing environmental education in the education curriculum, starting from primary education, which is still very minimal. Therefore, awareness to prioritize environmental health above economic interests can be embedded in the hearts of every student as early as possible and foster a high sense of concern for the environment. Knowledge and provision of environmental awareness from the basic level can be done by

²¹ Suparmoko, "Peranan Sumber Daya Alam Dan Lingkungan Dalam Pembangunan, 2014," in *Modul I* (Universitas Terbuka, 2014), 3, repository.ut.ac.id.

²² Hario Danang Pambudhi and Ega Ramadanti, "Menilai Kembali Politik Hukum Perlindungan Lingkungan Dalam UU Cipta Kerja Untuk Mendukung Keberlanjutan Ekologis," *Jurnal Hukum Lingkungan Indonesia* 7, no. 2 (2021): 297-322, <https://doi.org/10.38011/jhli.v7i2.313>.

including environmental education in the form of local content, self-development related to environmental protection and management policies and the integration of each subject ²³. Every student is given the opportunity to demonstrate the values of caring for the environment through behavior at school. The assessment carried out refers to the achievement of environmental care value indicators ²⁴. As a guarantee of its legality and strength, an environment-based curriculum must be included in the legislation, especially the law.

The two aspects briefly mentioned above will greatly support environmental conservation by providing space for strengthening indigenous peoples' institutions, strengthening indigenous peoples' institutions is very necessary, considering that indigenous peoples are very aware of the issue of environmental conservation. Constitutionally, Article 18B paragraph (2) of the Constitution of the Republic of Indonesia states that:

"The state recognizes and respects customary law community units and their traditional rights as long as they are still alive and under the development of society and the principles of the Unitary State of the Republic of Indonesia, which are regulated by law."

The formulation of legal norms governing customary law community institutions is very clearly regulated in Article 18B paragraph (2) of the Constitution of the Republic of Indonesia. However, is the customary law community no longer under the principles of the Unitary State of the Republic of Indonesia? The existence of customary law communities still exists in Indonesia, such as the customary law community in Bali, the customary law community in Tengger, the customary law community in Kalimantan, and the customary law community in the Badui Banten, as well as the customary law community in the Sulawesi region. Strengthening customary law community institutions needs to be regulated by law following the constitution's mandate considering that indigenous peoples still exist even though the world has changed.

Existing customary institutions should be fully respected and given the trust to manage and develop the existing environment in their territory, especially in the forest environment. Indigenous peoples have had rules of belief and guidelines as the basis for managing and preserving their environment, such as the advice of Kampung Kuta in Ciamis, citing their ancestors' message, which said, "*Leuweung ruksak, cai beak, manusa balangsak*" (damaged forest, depleted water, miserable people) ²⁵. It can be done if there is a special regulation as legality that gives authority and trust to traditional institutions. It can be in the form of a Government Regulation or Presidential Decree. What has happened so far is that laws and regulations only recognize the indigenous peoples' rights. However, there is no clarity and legal certainty about what rights they control. Therefore, whenever there is a policy from the central government regarding forest management, indigenous peoples must be rejected. Basically, they authorize the area to find sources of livelihood before the founding of the Indonesian state.

²³ Rica Naudita Krisna Setioningrum and Jajok Mukono, "Mplementasi Program Adiwiyata Mandiri Dalam Peningkatan Partisipasi Pembelajaran Lingkungan Hidup Di Smp Negeri 12 Surabaya," *Jurnal Ilmiah Pendidikan Lingkungan Dan Pembangunan* 21, no. 01 (2020): 30–42, <https://doi.org/10.21009/plpb.211.04>.

²⁴ Shanta Rezkitia and Kristi Wardani, "Pengintegrasian Pendidikan Lingkungan Hidup Membentuk Karakter Peduli Lingkungan Di Sekolah Dasar," *Trihayu: Jurnal Pendidikan Ke-SD-An* 4, no. 2 (2018): 327–31.

²⁵ Erlan Suwarlan, "Peran Lembaga Adat Kampung Kuta Dalam Pelestarian Lingkungan Hidup Berbasis Kearifan Lokal Di Kabupaten Ciamis," *Jurnal Agregasi : Aksi Reformasi Government Dalam Demokrasi* 8, no. 2 (2020): 114–28, <https://doi.org/10.34010/agregasi.v8i2.3289>.

As an implementation of article 18 (B) paragraph 2 of the 1945 Constitution which regulates state protection of the existence of indigenous peoples. Furthermore, the state gives authority to the community which is regulated in article 26 of the 2009 Law on Environmental Management and protection which regulates one of the environmental control instruments, namely the preparation of AMDAL (Environmental Impact Analysis) documents. The community in question is the affected community, environmental observers and the community affected by the AMDAL decision. In addition to these regulations, the recognition and position of customary rights in environmental management can also be found in regulations governing the environment such as the Forestry Law and Law No. 17 of 2019 concerning Protection of Water Resources, the role and function of customary institutions in the Forestry Law and the Water Resources Protection Law can still be said to be the same.

Looking at the parties involved in the AMDAL process, the existence and involvement of indigenous peoples in the process of granting environmental utilization permits is not clear. The rights of indigenous peoples (Hak Ulayat) should have been clearly mentioned and given a place that is more important and stronger than the other parties in the process. So that in the utilization of customary land such as indigenous peoples' forests, many are carried out deliberately without permission, in which there are customary forests or customary forests which are the embodiment of the customary rights of local indigenous peoples²⁶. Many disputes between indigenous peoples and investors or with the state regarding land use objects, especially forests, are due to the neglect of indigenous peoples in the process of determining policies related to the environment.

As parties who are involved and feel directly from the implementation of activities involving the environment and have close ties both sociologically and geographically, indigenous peoples should be made the main subjects in granting environmental management permits. So that indigenous peoples can always be active starting from the beginning of the activity, during implementation and until the implementation ends. The task of the state in this case is to provide strong authorities for the existence of customary rights to protect the environment. It is not what has happened so far that customary rights are still in a passive position that is only given information disclosure about environmental management activities with very weak authority in determining policies.

Giving strong authority to the community in terms of environmental management and protection policies will certainly reposition the institutional position of indigenous peoples in the licensing system, which so far the central and regional governments still hold the full power to grant environmental management permits, as has happened in granting permits in the utilization of water resources. The repositioning effort is our recognition and appreciation of customary rights, that indigenous peoples are actually more entitled to the surrounding environment than the state, and the state should provide protection of their rights not the other way around.

4. CONCLUSION

Based on the research and analysis described in the discussion above, the author can conclude that strengthening the role of the community in environmental protection and management, both from individuals, groups and organizations must get the main place and

²⁶ Adonia Ivonne Laturette, "Penyelesaian Sengketa Hak Ulayat Pada Kawasan Hutan," *Sasi* 27, no. 1 (2021): 102, <https://doi.org/10.47268/sasi.v27i1.504>.

attention on a national scale. This place and attention can be realized if the state makes the community a partner in environmental protection and management, and makes the community the frontline in environmental protection supported by state sovereignty. In addition, in order to realize environmental protection in the face of the upcoming industrial era, it is very urgent to reposition the position of customary institutions of customary rights so far, customary institutions in several environmental laws function as environmental supervisory institutions, but looking at the facts that occur, these positions and functions do not have a significant impact on improving and restoring environmental conditions. Based on changes in the political system and reforms in the education system as the main provision, it is necessary to reposition customary institutions as one of the determining elements in environmental policy and as one of the subjects that grant authority in environmental management. Therefore, it is necessary to reposition customary institutions as one of the determining elements in environmental policy and as one of the subjects that grant authority permits in environmental management.

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