

The Nickel Industry in Indonesia: How Far Are the Environmental Impacts and the Legal Liability?

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Abstract

One of the elements of human rights is the right to a safe and healthy environment—industrialization's role as an economic booster. However, the Konawe Nickel Industrial Area's industry impacts the environment. This research examines the legal liability for (VDNI) Virtue Dragon Nickel Industry Inc.'s environmental impacts in Morosi District, Konawe Regency. The findings revealed that the nickel smelter industry Konawe's VDNI Inc. activity resulted in a change in ambient air quality that exceeded the required air quality standard, noise disturbance that exceeded the quality of noise needed standard, as well as Toxic and Hazardous Waste (B3) waste and non-Toxic and Hazardous Waste (non-B3) waste that was still stored in one place and did not report their business activities to the Provincial and Regency Environmental and Forestry Services and the Industry and Energy Office regarding the use of coal-fired power plants in the electricity sector. As a result, VDNI Inc. must be held entirely accountable (strict liability) in administrative, civil, and criminal law.

I. Introduction

The Stockholm Declaration (1972) and the Rio Declaration (1992) are two landmark international agreements recognizing human and environmental rights (Anggriawan et al., 2018; T. Feng et al., 2022; Handl, 2012; Wang et al., 2022). The Republic of Indonesia's 1945 Constitution, which states that every person has the right to a decent and healthy life, is one of the nations that acknowledge this. It is implied in Article 28H of the Constitution (Asshididdiqie, 2015, p. 248). It is a reminder that the environment has developed into a problem that requires cooperation for humanity to continue existing globally (Muhjad, 2016, p. 5; Zhang et al., 2020).

Ironically, this obligation needed to be properly carried out despite practically all social structures breaking environmental laws (Asshididdiqie, 2015, p. 216). For example, Sidoarjo hot mud pollution by Freeport Inc. in Papua, pollution by Newmont Minahasa Raya Inc. in Buyat Bay (Syarif & Wibisana, 2015, pp. 23–28), the ILVA

steelworks' dioxin pollution in Puglia, the disaster caused by improper waste management in Campania's Land of Fire, the petrochemical pylons of the Gela and Milazzo industries in Sicily, and the Seveso tragedy in Lombardy (Germani et al., 2020). Particularly, the sector and its impacts hurt people's health as well as major environmental degradation (Kwakwa, 2021; Ritzer, 2012, p. 948; Wu et al., 2021).

According to WHO data, environmental issues such as exposure to hazardous chemicals and air sanitation increased in 2016 with heat waves and bad weather, and air pollution caused 24% of global population deaths, or approximately 13.7 million deaths per year (Prüss-Üstün et al., 2016, p. 15). Indonesia's industrial downstream program, which focuses on the mining and mineral industry, the coal and fuel industry, as well as the agro-industry (Kementerian Perindustrian, 2016), has the potential to damage the environment (Kementerian et al., 2022). According to studies, the coal power industry is a major source of pollution and a health risk (Chen et al., 2021; Singh et al., 2023; Tim et al., 2015). Furthermore, smelting operations pollute the soil and plants in the smelting area (Kang et al., 2021; Kicińska & Wikar, 2021; Wei et al., 2020). This research explains in detail how the nickel industry is in Indonesia and how big its environmental impact and legal responsibilities are because Indonesia has a large population and clearly puts great pressure on natural resources and other development results in accordance with human needs.

2. Research Method

This study was conducted from January to March 2021 in the industrial region of VONI Inc. Morosi District, Konawe Regency, Southeast Sulawesi Province. Data-gathering strategies included observations, direct interviews with informants, and literature reviews. The data were acquired, and descriptive qualitative analysis was used to understand them. Primary, secondary, and tertiary legal materials are the sources of information used in empirical legal research.

Table 1. Lists the research's sources and informants

Informant	Status of Informant	Amount
Government		
Southeast Sulawesi Province's Department of Environment and Forestry (DLHK)	AMDAL field	1
Environment and Forestry Service of Konawe Regency	Dispute Resolution in the Environmental Field	1
Department of Energy and Mineral Resources of the Province of Southeast Sulawesi (ESDM)	Dispute Resolution in the Environmental Field	1
Office for Morosi District	Electricity Sector	2
	Secretary	1
Non-Government		
Society	Marketeer	1
VONI Inc. Employees	Labour	4
	Member of State Vital Objects (OBVIT)	2

Table 2. Research-related data

Primary Legal Resources	Additional Legal Materials	Tertiary Legal Materials
The Republic of Indonesia's 1945 Constitution's preamble and Article 28H	Addendum ANDAL VDNI Inc. 2020	Books-related cases and reputable journal articles
Environmental Management and Protection Law Number 32 of 2009		
Environmental Management and Containment Government Regulation No. 22 of 2021		
Interview Note Results		

This study uses a socio-legal legal approach, a type of legal research methodology that looks at the relevant legal provisions as well as what is happening in society or research on actual societal conditions, with the to discover be used as research data, which is then further analyzed (Irianto, 2012). Lawrence M. Friedman's legal system theory evaluates the data to spot issues (Friedman, 2018).

3. Results and Discussion

Environmental Impacts on Virtue Dragon Nickel Industry Inc.

By regulatory requirements, VDNI Inc., a legal entity and the founder of nickel refining firms, is responsible for maintaining natural resources' functionality and carrying capacity. To prevent environmental harm, this company needs an environmental permit. Therefore, business actors must examine the environmental impacts that result from their actions through ecological impact analysis and environmental management environmental monitoring efforts beginning with the pre-construction, building, and after-construction (operation) phases. According to PP 22 of 2021, an environmental impact analysis is an assessment of a prospective business's or activity's important ecological effects.

The Major Impact

The major impact is classified into two categories according to its nature: The Cumulative Impact includes increased emissions of carbon monoxide (C.O.), carbon dioxide (CO₂), particulate matter, sulfur dioxide (SO₂), and nitrogen dioxide (NO₂) from regional infrastructure operations that coincide with power plant operations and the operation of the incinerator in the same area, specifically the ambient/atmosphere around the Konawe industrial area. Other regional infrastructure projects will release these gases simultaneously.

Holistic effects also consider how a community may perceive a given activity as a result of other pre-construction, construction, and operation-related activities. Activities to acquire land and conduct outreach lead to the pre-construction stage. The following effects during the building phase result from hiring construction workers: clearing and

preparing the site, developing industrial areas or land, and releasing the workers. Contamination of both solid and liquid waste indirectly impacts.

Directives for environmental impact management are created for each significant impact at each step of an activity based on a holistic impact appraisal. All criteria that have been determined to have substantial effects are managed. Based on routine monitoring by VDNI Inc., the degree of environmental management success can be determined. The monitoring focuses on the pertinent factors, offering an overview of the arrangement level, an assessment of trends, and an assessment of critical levels. Consequently, monitoring must be done in compliance with regulations, submitting and monitoring findings to the Ministry of Environment and Forestry, Southeast Sulawesi Province's Environment and Forestry Service, and Konawe Regency Environmental Service every six months for changes in ambient air quality, increased noise disturbance, and toxic and hazardous waste (B3). This study focuses on issues related to air, noise, and harmful and dangerous waste (B3).

Table 3. The Nickel Ore Processing Factory of VDNI Inc's Environmental Management Success Indicators

Management Success Indicators					
No	Kind of an Important Impact	Important Source of Impact	Measures of Environmental Management Success	Environmental Management Location	Environmental Management Institution
1	Ambient air quality changes	Factory Operation	According to Government Regulation No. 41 of 1999 regarding Air Pollution Control, ambient air quality does not meet the Quality Standards (Q.S.).	Up the haul road, toward the plant area Chimney location	Executing organizations VDNI Inc.
		Infrastructure Support	According to Ministerial Decree No. 21 concerning B.M. for Stationary Source Emissions for Businesses and Thermal Electricity Generating Activities, the B.M. level for supporting facilities is, at most, the quality standard.		Supervisory Agency Ministry of Environment and Forestry (KLHK) DLHK Southeast Sulawesi Province and Konawe Regency
			Kiln, dryer, and finance emissions are not more than the B.M. allowed by Permen No.4 of 2014 About the Q.S. of		Department of Energy and Mineral Resources (ESDM) Southeast Sulawesi Province Regional Local District/Village Government

		Immovable Source Emissions for Mining Businesses and Activities.		• Report Recipient Agencies
				KLHK DLHK Province and Konawe Regency
2	Improved noise interference	• Factory Operation • Infrastructure Support	Ministerial Decree No. 48 of 1996 concerning Noise Level Standards states that noise does not exceed the B.M. Noise level.	
3	The potential of Hazardous and Toxic Waste (LB3)	• Factory Operation • Support facility operations	Obtaining information, reporting, granting licenses, and carrying out permit requirements in line with laws and regulations	Project location

Source: Addendum to Andal and RKL-RPL Nickel Ore Processing Plant Virtue Dragon Nickel Industry Inc in Morosi District, Konawe Regency, 2020.

Environmental Degradation in Industrial Areas

Industrial developments may affect environmental efficiency in ways like environmental contamination (Y. Feng et al., 2019; Guo et al., 2021; Maryati et al., n.d.; Massaro et al., 2022; Nde et al., 2021). Environmental pollution, according to Law No. 32 of 2009, is the introduction or inclusion of living beings, substances, energy, and other components into the environment by human activities to an extent greater than the established environmental quality criteria. Environmental quality standards are used to measure the occurrence of ecological pollution under Article 20 Point (1) (Undang-Undang Nomor 32 Tahun 2009 tentang Pengelolaan dan Perlindungan Lingkungan Hidup, 2009).

Both the Government and industry have to protect the environment for future generations (Khairina et al., 2020; Muhajir et al., 2016). The Government's responsibility is to monitor and report to beneficiaries, and the industry has to report on each of its actions in compliance with the IMMP directives. This study's researchers discovered that VJNI Inc. disregarded the IMMP commands. Due to this negligence, the standards for noise, B3 and non-B3 waste, and air quality were exceeded (Akadiri & Adebayo, 2022; Parveen et al., 2021).

Ambient Air Quality Changes

According to research published in the Addendum Documents to the ANDAL and RKL-RPL for nickel ore management at VJNI Inc. in Morosi District in Konawe Regency in 2020, it was discovered that:

"The air quality indicators (SOx et al., dust, PM2.5, and PM10) are still rising. Puuruy Village, Morosi Village, and the Factory Area were the three places where air and dust samples were collected. Laboratory test results showed that they had satisfied the necessary quality requirements. However, the critical level sub-evaluation determined that numerous parameters, including dust, PM2.5, and PM10 in the manufacturing area, had surpassed the critical limits (found March 24, 2021).

Human health will be affected by changing air quality(Soto-Coloballes, 2020). The pattern of disease and environmental sanitation in the VDNI Inc. region has changed, and it is now at a crucial point when the predominant respiratory tract infection (ARI) is brought on by air pollutants created by industry operations and supporting infrastructure (Virtue et al., 2020). Exposure to industrial PM2.5 raises the possibility of developing Alzheimer's disease and dying from it. Meanwhile, exposure to PM2.5 and Nox from industry is linked to a decline in lung function, according to the presence of respiratory symptoms (Bergstra et al., 2018; Song et al., 2021), a dry cough and respiratory tract infections are all strongly correlated with PM2.5 (ARI).

We have discovered several public complaints about the dust produced by VDNI Inc.'s operations. Based on the findings of interviews with AMD-identifying informants from the neighbourhood, researchers concluded that:

"The presence of VDNI Inc. not only creates jobs and stimulates the economy, but it also has a detrimental influence causing exposure to dust and noise from the company's operating vehicles. Noise annoys me greatly, and dust exposure makes everything in my home dusty, including my merchandise, and forces my family and me to wear masks even inside the house. I hope the business waters the roadways used for industrial operations daily in our region, just like it does for the entrances to its buildings (interview, January 25 2021)."

The sub-district head in the region has also objected to complaints about dust brought on by VDNI Inc., as revealed by the results of an interview with ST (OBVIT VDNI Member):

"Three sub-district heads, Morosi, Bondoala, and Kapoiala, voiced their displeasure with the black dust produced by VDNI Inc. (January 19 2021)."

This situation demonstrates that VDNI Inc.'s surroundings are no longer healthy. The negative influence is not yet evident (3 years into VDNI Inc.'s existence), but in 10 years, it will begin to resemble what happened in other nations, including China, India, Brazil, the United States, England, and other industrialized countries (Worlanyo & Jiangfeng, 2021).

To support its manufacturing, VDNI Inc. developed an 8×60 MegaWolt coal power plant (Virtue et al., 2020). Building coal-fired power stations, which exposes people to dangerous compounds, ozone, and heavy metals, is the main cause of air pollution (Filonchuk & Peterson, 2023; Tim et al., 2015). VDNI Inc. never reports business operations that provide electric power for their interests if they are based on an operational permit.

According to the findings of interviews performed by researchers at Southeast Sulawesi Province's Department of Energy and Mineral Resources (DEMR), representatives of the power sector with the initials MLS, Y.M., and FRM stated that:

"VDNI Inc. has never submitted any reports to the DEMR Service regarding the performance of its obligations under the operating license to provide energy for internal use (interview March 7 2021)."

This demonstrates that VDNI Inc., following the Decree of the Head of the Investment and One-Stop Services Office of Southeast Sulawesi Province Number 222/DPMPTSP/IV/2020 in Appendix III point 2, do a waiver of obligations for holders of operating licenses to provide electricity for their interests, the operating permit holder must periodically report to the Department of Energy and Mineral Resources of the Province of Southeast Sulawesi on his business activities every 6 (six) months while the I.O. is in effect. The Governor of Southeast Sulawesi should be subject to administrative consequences in the form of a written warning, a temporary suspension of activities, and the revocation of the operating permit if the holder of an operating license fails to submit the required report.

Improved Noise Interference

At the beginning of construction, all measurement locations' baseline noise levels still complied with the noise quality requirements outlined in Kepmen No. 48/MenLH/11/1996 Concerning Noise Standards. Project site: 65 dB(A), Hauling Street: 60 dB (A), Morosi Village: 43 dB, Ulu Lalimbue: 50 dB (A), Lalimbue Jaya: 50 dB (A), Tani Indah: 50 dB(A), Porara: 50 dB(A), Puuruy: 50 dB(A), and (A) (Park, 2018). The Project Site (PLTU construction) and Hauling Road are the two locations that are closest to the quality standard based on the findings of these measurements. The nuisance quality standard, as defined by P.P. No. 22 of 2021, is the largest size of a pollutant whose presence is permitted, including vibration, noise, and smell released from emission sources (Peraturan et al. 22 Tahun 2021 tentang penyelenggaraan Perlindungan dan Pengelolaan Lingkungan Hidup, 2021).

Table 4: Results of Noise Level Measurements in VDNI Inc Addendum to ANDAL and RKL-RPL Documents in Morosi District, Konawe Regency, In 2021

No	Place of Measurement	Results of measurement [dB (A)]		Quality standards [dB(A)]
1.	Puruy Village	RLH AMDAL	55.79	50.00
		Pemantauan 2019-I	74.00	50.00
		Pemantauan 2019-II	67.00	50.00
		RLH Addendum	62.40	50.00
		RLH AMDAL	55.22	50.00
2.	Morosi Village	Pemantauan 2019-I	73.22	50.00
		Pemantauan 2019-II	74.00	50.00
		RLH Addendum	56.40	50.00
		RLH AMDAL	75.73	70.00
		Pemantauan 2019-I	70.00	70.00
3.	Factory Area	Pemantauan 2019-II	75.00	70.00
		RLH Addendum	74.70	70.00

Source: Addendum to Andal and RKL-RPL Nickel Ore Processing Plant Virtue Dragon Nickel Industry Inc in Morosi District, Konawe Regency, 2020.

The table demonstrates that the noise levels at the three measurement sites were above the necessary quality criteria. This was brought on by manufacturing (smelter) activity and vehicle noise during operation. It was exceeding the quality of noise required standards because VDNI Inc. did not maximize management following the instructions in

the EMMP document, namely choosing facilities and equipment that included the availability of noise control kits like mufflers and silencers, the use of silencers on equipment and vehicles, and routine maintenance of the equipment and dispositions Kepmen No. 48/MenLH/11/1996 Concerning Noise Standards. Long-term exposure to noise levels beyond the threshold value can induce hearing loss, emotional disturbances that raise blood pressure, visceral consequences such as changes in heart rate, blood pressure, and perspiration levels, as well as psychosocial and psychomotor effects.

People nearby industry areas are beginning to complain about the noise from passing vehicles. According to a VJNI staff member with initial YDI who was successfully interviewed, YDI said:

"The smelters and cars I hear every day from sunrise until night without stopping are extremely close to my leased room, and you can see for yourself how horrible the dust is. Only the VJNI Inc. trucking road from Jeti receives road watering. However, it is unfortunate that there is no watering on the road leading to VJNI and OSS Inc., which are close to my boarding place. The road leading to the jetty also includes potholes, and because of the high speeds and slickness of the roadways, there have been many incidents that have resulted in death and very few survivors, making many people terrified to pass them (interview January 26, 2021)."

The EMMP directives for noise disturbance require that the company install a noise filter on the exhaust of the vehicle being used, limit the vehicle's speed by posting a maximum warning on traffic signs, and regulate working hours by avoiding transportation during rest periods, especially for transportation that crosses settlements (Virtue et al., 2020). Based on YDI's presentation, the researchers concluded that the noise levels around VJNI Inc. are currently above the established quality standards and will continue to rise, especially given that the company wants to increase production capacity from 600,000 tons/year to 1,000,000 tons/year, the number of production lines from 12 production lines (3 backups) to 15 production lines (without backup), as well as raw and supporting materials: nickel ore from 4,500,000 tons/year to 10,000.000 tons/year (Virtue et al., 2020, p. I-2).

Hazardous and Toxic Waste (LB3)

According to Law Number 32 of 2009 governing Environmental Management and Protection (EMP), hazardous and toxic waste, referred to as dangerous and toxic waste, is the leftovers from a business and activity that contains hazardous and toxic. According to the findings of interviews done by researchers with the Konawe Regency Environment and Forestry Service, the field of complaints and environmental dispute resolution, also known as J.Y., stated:

"For B3 waste temporary storage activities, VDNIP does not currently have a wastewater disposal permit or a B3 waste management license. We visited the site and held a technical meeting for the wastewater disposal permit; nevertheless, the outcomes of the meeting did not fulfil the requirements, and it was advised that the requirements be met. VDNIP Inc. does not dump its waste in the sea if OSS Inc. exists because the PLTU is close to the sea and there is no emission permit. As for the

management of B3 waste for the temporary storage of B3 waste, we allowed them to first build the TPS and now they are in the process of applying for a permit (February 18 2021 interview)."

According to the findings of researcher interviews, the DLH of Southeast Sulawesi Province's B3 Waste Management division, which goes by the initials SVS, stated that:

"In general, when permits were issued by the Ministry, we are also involved, but as of right now, VDNI Inc. doesn't yet exist, we have not yet received permits for permissions issued by the Ministry related to B3 Waste (interview February 22 2021)."

Strengthened by the National Vital Object (OBVIT), VDNI Inc. states that:

"A B3 waste management permit is being processed by the business (interview from January 28, 2021)."

Based on the interviews' results, it is also evident that VDNI Inc.'s infractions were mostly disregarded by the Konawe Regency Environment and Forestry Service (DLHK), which should have taken more serious enforcement action. VDNI Inc. has been in operation since 2015; however, as of February 26, 2021, they need the technical certifications required for environmental management and protection. Because of the orders from VDNI Inc., EMMP is a requirement in this circumstance.

Several cross-governmental levels such as District, Provincial, and Provincial DLHK, as well as Governors to impose administrative sanctions in the form of temporary suspension of VDNI Inc. operations up to the compliance of these obligations according to the directions from the EMMP of VDNI Inc. When these obligations are not met, VDNI Inc. operations run the risk of polluting the environment, endangering the health of those living around the industrial region. The findings of the successful interviews conducted with VDNI Inc. employees (alums from the UHO mining department) with the initials W.N. revealed that:

"Because VDNI Inc lacks a leachate storage pond, they make roads and swamp piles out of the slag left over from burning nickel ore. Sometimes when it rains, the dust gets mixed into the water that is dropping. The speed of the company's vehicles is unrestricted, interview, February 6, 2021)."

After speaking with the Secretary of the Morosi sub-District Pak ASR, the researcher obtained the following results:

"Around mining sites, VDNI Inc uses nickel ore slag as the foundation for concrete roadways (interview, January 25 2021)".

The solid waste pile (B3) should have been constructed around it to allow for leachate drainage, which empties into the leachate storage pond, which is the monitoring point; according to these results show that the VDNI Inc. did not comply with the EAI and EMMP guidelines. Then, referring to Article 15 paragraph (2) B3, waste storage facilities in the form of waste piles must comply with the requirements Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.12/Menlhk/Setjen/Plb.3/5/2020 Concerning Storage of Hazardous and Toxic Waste.

The requirements are as follows:

- a. Having drainage channels around the waste pile designed to drain water contaminated with stored B3 waste to a water storage pond;
- b. Have a barrier around;

- c. The waste pile with a height of at least 1 meter from the ground surface to prevent spills and spillage of B3 waste out of the storage area and
- d. It has groundwater monitoring well facilities built upstream and downstream where waste piles are placed by the pattern of groundwater flow directions.

The issue with VDNI Inc.'s use of nickel ore slag for road or swamp piles is that it undoubtedly needed to meet the technical specifications outlined in Government Regulation Number 22 of 2021 in Article 452 number (1). VDNI Inc. also uses nickel ore slag without first obtaining a use authorization.

The results of the researcher's interview with I.B. (DLH et al.) said that:

"No EMMP report from VDNIP Inc. has been received since the environmental permit was approved on November 26, 2018, until this day (interview: February 11, 2021)."

According to the findings of interviews with the Pak JYD Regency's Head of Complaints and Environmental Problem Solving:

"The EMMP report on nickel ore management and the B3 waste management report were received for the first time on February 3, 2021 (interview, February 18 2021)."

The findings of the researchers' interviews with participants made clear that VDNI Inc. is in violation of the Southeast Sulawesi Province Decree on Investment and One Stop Integrated Services Number 963/DPM-PTSP/XI/2018 regarding Environmental Permits for Konawe Industrial Area Development Activities in Morosi, Bondoala, and Kapoiala sub-Districts, Southeast Sulawesi Province by Virtue Dragon Nickel Industrial Park Inc. Hazardous and toxic waste storage is governed by the Republic of Indonesian Minister of Environment and Forestry Regulation Number P.12/Menlhk/Setjen/Plb.3/5/2020, Article 32. The authority granting the B3 waste management permission must be notified of storage operations using the document for documenting B3 garbage. Making a B3 waste balance and reporting it every three months is required under EMMP guidelines on efforts to manage the environment using technology. The 2020 EAI and EMMP addendum documents for the VDNI Inc. nickel ore management plant include study findings that:

"B3 generated by VDNI Inc is still being processed for permissions, such as B3 waste management permits for B3 waste utilization activities and B3 waste management permits for temporary LB3 activities. Because VDNI Inc has not yet taken care of licensing in line with statutory restrictions, the critical level evaluation shows that the amount of B3 waste produced exceeds the critical level, 2019 evaluation completed (found March 24 2021)."

It is conclusion demonstrates that the VDNI's failure to comply with the EMMP and the laws and regulations results in the production of B3 waste that is over the threshold. However, it may be inferred that those that surpass the critical level are registered non-B3 waste since nickel ore slag, fly ash, and bottom ash Thermal Power Plant (TPP) were removed as B3 waste and created as non-B3 waste registered. This occurred as a result of the firm needing a B3 waste permit before the B3 waste was revoked as per the terms of Law Number 13 of 2020 Concerning Job Creation. The corporation then keeps the registered non-LB3 in the same location and open, which is highly risky because it is very likely to leak and pollute the soil, surface water, and groundwater.

Legal Liability for The Environmental Impact Caused by VDNI Inc.

Administrative Law Responsibilities

Preventive Efforts

The Perspective of Administrative Law as a preventive effort in the framework of controlling environmental impacts needs to be carried out by making maximum use of monitoring and licensing instruments. VDNI Inc. must accept legal accountability for the acts of its commercial operations regarding pollution. In light of this, legal certainty is provided by the legislation on environmental preservation and management clearly and definitively.

When it comes to administration, supervision refers to the power that the Government has due to the issue of licenses. (1) Ministers, governors, regents, or mayors, in line with their power, are obligated to oversee the compliance of those in charge of business and activities with the provisions established in laws and regulations in the field of environmental protection and life management. (2) Technical personnel or agencies in charge of environmental management and protection may be given the power to carry out monitoring by ministers, governors, regents, or mayors. (3) The Minister, governor, regent, or mayor selects an environmental supervisor who is a functional officer to carry out oversight (Undang-Undang Nomor 32 Tahun 2009 tentang Pengelolaan dan Perlindungan Lingkungan Hidup, 2009).

Repressive Efforts

From Articles 76 to Article 79 Environmental Management and Protection Act, this administrative rule is found. When environmental permit breaches are discovered when an organization is being supervised, ministers, governors, regents, or mayors impose administrative consequences on persons in control of the business or activity. In addition, administrative penalties may include a written warning of government pressure, suspension of environmental permissions, or revocation of environmental permits.

Thus, the ability granted to Governors, Regents, and Mayors under Article 76 Environmental Management and Protection to exert government pressure (*bestuurdwang*) on individuals in control of business is based on their respective scope and jurisdiction. Suppose the Government believes that the regional Government purposefully does not apply administrative sanctions to major infractions in the area of environmental protection and management. In that case, the Minister may impose administrative sanctions on persons in control of a firm. The Government will not release persons in charge of organizations or actions from civil and criminal liability. Administrative penalties such as the suspension or cancellation of environmental licenses may be imposed if the person in charge of the business or activity refuses to submit to government pressure.

Civil Law Responsibilities

Settlement of environmental disputes can be reached through the courts and outside the Alternative Dispute Resolution (ADR) court. The criterion in civil environmental disputes is violating the rights of others, which is listed in Article 65, Point 1 of the EMP Act. Therefore, civil law liability is regulated in the provisions of Corporate Social Responsibility (CSR) Law No. 40 of 2007 concerning Limited Liability Companies and

Environmental Management and Protection Act Articles 88 to Article 90.

Victims (recipients) of impact who are subject to legal restrictions may use a strict responsibility scheme. Every business or activity that engages in an unlawful act is required to accept full responsibility without the need for proof. Environmental disputes are resolved outside of the legal system in order to agree on the amount of compensation, the measures to be taken to recover from pollution or other damage, the measures to be taken to ensure that the damage or pollution will not happen again, and the measures to be taken to protect the environment.

Criminal Legal Liability

The highest number of articles, 97 to 120, govern criminal penalties. According to Article 88 of the Environmental Management and Protection Act, anyone who uses B3, produces or manages B3 waste, poses a major threat to the environment, or engages in economic operations that do so is entirely accountable for the losses sustained without needing to establish any elements of guilt.

According to Article 98 Point 1, anyone who intentionally violates the criteria for ambient air quality, water quality, sea water quality, or environmental damage is subject to a prison sentence of at least three years and up to ten years, as well as a fine of at least IDR. 3,000,000,000 (Three billion rupiah) and at most IDR. 10,000,000,000. (Ten billion rupiah). Thinking about the goals of the law, certainty, fairness, and legal advantages emphasizes that we are all in a position to achieve a good and healthy environment and lessen the effects of environmental harm (Widowaty, n.d.). The legal system always has three components, namely the legal structure component, the legal substance, and the legal Culture, according to the researcher's usage of Lawrence M. Friedman's theories on the legal system from his book *The Legal System: A Social Science Perspective* (Friedman, 2018).

The lack of environmental coordination between Konawe Regency and Southeast Sulawesi Province LHK Service regarding routine reporting of changes in ambient air quality, noise, and hazardous and toxic waste issues that have not completed their permits, as well as the duty to report on PLTU installations to the Provincial Department of Energy and Mineral Resources, is the legal framework for environmental impacts in the Industrial Area of VDNI Inc. By designating a government agency as a bridge or an extension, it is envisaged that in the future the Government can be structured in a single environment.

Legal Culture, the cultural and social effects brought about by VDNI Inc., are transforming the neighbourhood's erstwhile farmers, fishermen, and sand miners into industrial employees and traders in the Industrial Area just that the environmental effects that would be felt in the future may be more hazardous, such harm to ecosystems brought on by changes in how the land functions, air pollution that raises carbon (C.O.) levels, sickness, even death, and the potential for extinction of animals and plants.

4. Conclusion

This study has found that VDNI Inc. is responsible for changes in ambient air quality, noise, incomplete waste utilization permits, and waste that is still kept at one location may affect both persons and the environment. VDNI Inc. must thus be held accountable under the law. The Minister can apply administrative sanctions against those in charge of businesses and activities if the Government believes that regional governments are

purposefully failing to apply administrative sanctions to serious violations in the field of protection and environmental management. Administrative sanctions can take the form of written warnings, government coercion, freezing of permits, and revocation of environmental permits. In civil law, liability can be settled outside of court by reaching an agreement between the parties through CSR (corporate social responsibility). Also included in Law Number 32 of 2009 concerning Environmental Protection and Management is criminal law obligation, which is expressed in the form of criminal penalties in Article 98 number 1.

This research has a study boundary that only focuses on legal responsibility for environmental impacts caused by nickel refining industrial activities in the Morosi District. The Addendum of ANDAL and EMMP Documents of VDNI Inc. is the source of the data. As a result, it continues to rely on earlier research as a basis, and more study is required with a comparative approach to case studies as well as the requirement for in-depth interviews to collect data. However, cooperation between the Government and the community on the value of a clean and healthy environment is necessary to determine how much VDNI Inc. is legally responsible for environmental damage.

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