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| RESEARCH ARTICLE

Liability of Business Actors for Environmental Pollution Related to Disposal of Waste Produced by Cattle Farms in Indonesia

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| ABSTRACT
The fulfilment of human needs cannot be separated from the contribution of the cattle farming sector. In addition to the benefits of cattle farming, this business also has adverse impacts on the environment in terms of environmental pollution and global warming due to the solid, liquid, and gas waste. However, it can be minimized through the proper processing and disposal of cattle farm waste in accordance with applicable regulations in Indonesia, including Law number 32 of 2009 on Environmental Protection and Management (UUPPLH) and other regulations. This research aims to study the implementation of UUPPLH and the liability of cattle farming business actors who do not heed the regulations, leading to environmental pollution. This research used a normative research method with secondary data in the form of literature study and supported by primary data obtained from interview. The results of this research showed that the applicable regulations were in accordance with Gustav Radbruch's theory of legal objectives. Business actors were responsible for the pollution due to improper processing of cattle farm waste. The liabilities consisted of administrative, civil, and criminal liabilities. For civil liability, it was based on the Unlawful Acts (PMH) and the strict liability was determined in article 88 of UUPPLH. Therefore, business actors need to have self-awareness to carry out waste processing in accordance with regulations. Meanwhile, the government should take firm action against cattle farms that are intentionally or negligent in waste treatment and they need to conduct regular supervision in order to create a clean and healthy environment.

| KEYWORDS

Liability, environmental pollution, waste, cattle farm

| ARTICLE INFORMATION

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I. Introduction

Everyone has the right to fulfil their basic needs, which include clothing, food, and shelter. In daily life, food is the most basic need and its fulfilment is part of human rights guaranteed by the 1945 Constitution of the Republic of Indonesia (UUD NRI 1945) for quality human resources. One sector that plays an important role in fulfilling human needs for food is the livestock sector, as it contributes to the fulfilment of nutrition through the consumption of animal protein. Moreover, cattle farms also produce organic fertilizer and biogas.

In addition to these benefits, cattle farms have a negative impact on the environment due to the waste. In its activities, cattle farming produces 3 (three) types of waste which are solid, liquid, and gas. Solid waste comes from cow manure, feed leftover, cow skin, bones, and fat which reaches 20 (twenty) to 30 (thirty) kilograms per day per head, while liquid waste comes from cow urine, drinking water leftover, used water for bathing cattle, used water for cleaning farm equipment which reaches 100 (one hundred)

to 150 (one hundred and fifty) litters per day.[1] Meanwhile, waste gas is produced from cow burps, farts, manure containing ammonia, sulphur, methane (CH4), and hydrogen sulphide (H2S).[2]

The waste can cause water, air, and land pollution if not managed properly in accordance with regulations. In fact, human needs the environment to survive, including living through the availability of land, water, air, sunlight. Environment also provides places for socialization, seeking wealth and entertainment, as well as serves as a means of education and a source of culture. However, pollution of these abiotic components brings bad impacts in the form of unpleasant odor, fly infestation, harm to human health, and the greenhouse effect (Greenhouse Gas) which damages the environment and atmosphere.[3] Observing the data of the past 5 (five) years from 2019 to 2023, there were 137 (one hundred and thirty-seven) environmental pollution lawsuits registered at the Court. In addition, based on data recorded by Statistics Indonesia (BPS) in 2021, there were 10,683 villages experiencing water pollution, 1,499 villages experiencing land pollution, and 5,644 villages experiencing air pollution.[4] The data shows that waste pollution is contrary to the mandate of Article 28H of the 1945 Constitution of the Republic of Indonesia, which states that "Every person shall have the right to live in physical and spiritual prosperity, to have a home and to enjoy a good and healthy environment." This is also in line with Article 9 paragraph (3) Law Number 39 of 1999 on Human Rights.

An example of pollution case due to cattle farm waste in Indonesia was carried out by the largest dairy company in Southeast Asia, PT Greenfields Dairy Indonesia (Greenfields Indonesia) which then legally decided by the Blitar District Court that they had committed Unlawful Acts (PMH) and was sentenced to build a Wastewater Treatment Plant (IPAL) based on decision number 77/Pdt.G/LH/2021/PNBlt.

The government has established various instruments to protect cattle farming, considering that cattle farms are the potential to cause environmental pollution and/or damage, so that a number of prevention measures are needed. However, poor awareness of business actors and the lack of assertiveness of the government as a supervisory agent in implementing the applicable regulations has impeded a healthy living environment to be created.

Therefore, the research questions that arise from this research are as follows:

1. What are the provisions of waste treatment produced by cattle farms?
2. How is the responsibility of cattle farming business actors who conduct improper disposal of waste?

II. Legal Materials and Methods

The focus of this research is to observe the implementation of the applicable regulations, to examine the compatibility of the regulations with Gustav Radbruch's theory of legal objectives, and to examine the liability of cattle farms that violate waste disposal procedures. Thus, to answer the research questions, the normative research method was used using secondary data in the form of literature studies and supported by primary data obtained from interviews with Tangerang Office of Environmental Services. The regulations referenced in this research were Law No. 32 of 2009 on Environmental Protection and Management (UUPPLH), Government Regulation No. 22 of 2021 on the Implementation of Environmental Protection and Management (PP 22/2021), Regulation of the Ministry of Environment No. 11 of 2009 on Wastewater Quality Standards for Cattle and Pig Farming Businesses and/or Activities (PerMen LH 11/2009), Regulation of the Ministry of Environment and Forestry of the Republic of Indonesia number P.102/MENLHK/SETJEN/KUM.1/11/2018, Regulation of the Minister of Agriculture No. 14 of 2020 on Registration and Licensing of Livestock Businesses.

[1] Widianti Pratiwi, "Waste is Left to Pile Up, Undip KKN Students Conduct Socialization on Introducing Cattle Farmers' Waste Processing Methods in Tegalkuning Village" http://kkn.undip.ac.id/?p=286105#:~:text=Limbah%20padat%20yang%20dihasilkan%20dari,air%20bekas%20membersihkan%20peralatan%20peternakan, retrieved on January 31st, 2024

[2] Fauzul Romansah, "Law Enforcement Against Pollution from Beef Cattle Farming Waste," Administrative and Environmental Law Review 1 no. 1 (2020): 29, 10.25041/aelr.v1i1.2081

[3] Sella Dzuikhija, "The Issue of Livestock Activities as the Largest Contributor to Global Warming – The Dilemma Between Efforts to Increase Animal Food Productivity and the Environmental Love Movement", https://gc.ukm.ugm.ac.id/2017/07/isu-kegiatan-peternakan-sebagai-penyumbang-terbesar-pemanasan- global-dilema-antara-usaha-peningkatan-produktivitas-bahan-pangan-hewani-dan-gerakan-cinta-lingkungan/, retrieved on January 31st, 2024

[4] Central Statistics Agency, "Number of Villages/Subdistricts According to Types of Environmental Pollution (Villages), 2014-2021", https://www.bps.go.id/indicator/168/959/1/banyaknya-desa-kelurahan-menurut- jenis-pencemaran-lingkungan-hidup.html, retrieved on January 31st, 2024

III. Result and Discussion

Cattle farming for human needs is crucial. On the other hand, based on the data obtained from the Food and Agriculture Organization (FAO), cattle produce greenhouse gas emissions in CO2 equivalent to 5,024 gigatons, accounting for approximately 62% of total greenhouse gases produced by livestock sector in the world. Additionally, the International Energy Agency (IEA) found that the global main source of methane gas emissions is produced by agricultural sector, which also includes the livestock sector, especially cattle farms. The effect due to gas produced from cow farts or manure is 25 (twenty-five) times stronger than carbon dioxide (CO2).[5] It poses a dilemma whether to increase productivity to fulfil animal protein needs or increase environmental awareness.

At the moment, there is no leading-edge technology to process cattle farm waste, so it requires awareness from the business actors themselves and efforts from the government as the supervisory agent. In order to establish environmental sustainability, the government has promoted several programs, including counselling and familiarization, training in making biogas, and holding PROPER (Public Disclosure Program for Environmental Compliance) programs that will be published internationally, so that international and local buyers can take a note of the performance of these businesses in carrying out environmental management.[6]

However, these government programs are ineffective to raise awareness of business actors, since waste issues are often ignored, especially by the business actors. It is proven through data in the Decision Directory as follows:

Table 1. Decision on Waste Disposal

Year	Register	Decision
2019	91	92
2020	87	88
2021	47	66
2022	6	14
2023	3	4

Source: Decision Directory of the Supreme Court of the Republic of Indonesia, 2019-2023

An example of environmental pollution case due to cattle farm waste was carried out by Greenfields Indonesia. In 2017, the company established its second farms in Blitar with a capacity of 9,000 cows. A year later, the locals began to complain about the waste produced by the farm and the disposal of cows manure directly into the river which was carried out secretly during heavy rain at night. As the consequences, villagers' wells was contaminated, not to mention the water river became murky and dirty, killing the fish in the river. Moreover, it caused foul odor and mosquito infestation. On June 7, 2021, the Blitar Regent sent a letter of reprimand, but Greenfields Indonesia. A few days later, DLH Blitar sent a warning letter to re-evaluate the AMDAL document because the practices implemented by Greenfields were incompliant. However, these reprimands were left unnoticed and thus, as many as 242 households filed a Class Action lawsuit.[7]

In fact, article 33 paragraph (4) of the 1945 Constitution states that the national economy shall be conducted on the basis of continuity and upholding environmental perspective. This article clearly states that in addition to conducting activities/business for profit, cattle farms also need to preserve the environment by minimizing their pollution through the processing of cattle farm waste.

In its activities, cattle farming produces wastes. If reviewed further, the characteristics of the waste produced by cattle farming are in line with the characteristics of B3 waste as mandated in Article 11 letter (a) of the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia number P.10/MENLHK/SETJEN/PLB.3/4/2020 on Procedures for Testing Characteristics and Determining Hazardous and Toxic Waste Status. Based on this article, cow farm waste is categorized as explosive. Furthermore, Article 13 paragraph (2) states that if one of the test characteristics of B3 Waste is met, then proof of the other characteristics is

[5] Erlina F. Santika, "Where Are the Largest Sources of Global Methane Emissions?"". https://databoks.katadata.co.id/datapublish/2023/03/17/dari-mana-sumber-terbesar-emisi-gas-metana- dunia, retrieved on February 1st, 2024

[6]Mesi Shinta Dewi, Sub-Coordinator for the Arrangement and Implementation of Administrative Sanctions, Environmental Agency, Tangerang City, Interviewed on November 15th, 2023, at 09.20 WIB.

[7]Ayu Nurfaizah, "Environmental Pollution by PT Greenfields Indonesia", Research Report, East Java: Walhi and Global Forest Coalition, 2023, pp 15-16

no longer required. Thus, it can be concluded that cattle farm waste is hazardous and it requires special treatment to avoid environmental pollution.

As in the case of Greenfields Indonesia, the panel of judges ruled that the company committed an unlawful act in the form of environmental pollution. It means that their cattle farms did not carry out mandatory treatment of the waste and, therefore, they were held accountable. It is also in accordance with the principle embodied by UUPPLH of the Polluter Pays Principle. OECD (Organization for Economic Cooperation and Development) states that the polluter pays principle requires polluters to bear a sum of fee to control pollution, both for prevention and restoration.[8]

Provisions of Cattle Farm Waste Treatment

Cattle farm waste can be produced into organic fertilizer and biogas.[9]Biogas and compost/organic fertilizer are considered important because it has many benefits for economy, environment, and health. The fertilizer produced from cattle farm waste is useful for maintaining soil fertility. It is also beneficial for increasing the quality and quantity of agricultural production, reducing pollution, and improving soil quality in a sustainable manner. To process waste into biogas or organic fertilizer, initiatives are needed from business actors because currently there is no advanced technology to carry out the processing.

Provisions regarding waste treatment have been regulated by UUPPLH. UUPPLH is a legal instrument that was formed in line with the decline in the quality of the environment that poses a threat to the survival of humans and other living things. UUPPLH introduces 2 types of permits, namely environmental permits as contained in Article 1 point 36 and business licenses in Article 1 point 36. Environmental permit is given to anyone who conducts business and/or activities that require Amdal or UKL-UPL in the context of environmental protection and management as a prerequisite for obtaining business and/or activity licenses. It means that business licenses issued by technical agencies to conduct business and/or activities can only be issued when business actors have obtained environmental permits. After obtaining an environmental permit, business actors also need to obtain a business license from the Minister of Agriculture based on Article 9 paragraph (2) of PerMenTan 14/2020.

The provisions of waste treatment are regulated in Article 59 of the UUPPLH, which states that *"Every person who generates hazardous waste is obliged to manage the hazardous waste they generate."* However, the B3 waste treatment cannot be carried out immediately. It is related to Article 60 of the UUPPLH which reads "Every person is prohibited from dumping waste and/or materials into the environment without permits." It shows that every business actor that generates hazardous waste is required to obtain permits from the authorized agency.

Basically, Article 13 paragraph (3) of UUPPLH has stated that:

> *"Control of environmental pollution and/or damage is carried out by the government, local government, and the person in charge of the business and/or activity in accordance with their respective authorities, roles, and responsibilities."*

This article clearly states that in order to establish good environmental management, cooperation between government and community/business actor is needed. The community can contribute by completing their environmental documents as regulated in PP 22/2021. Moreover, cattle farms also need to obtain an AMDAL or UKL/UPL because their activities are directly related to the environment, as stated in Article 4 of PerMen LH 11/2009.

Furthermore, related to liquid waste generated from cattle farms, the wastewater quality standards must be complied with by every cattle farm as stated in Article 2 of PerMen LH 11/2009 which reads:

> *"Every business and/or activity of cattle and pig farming shall comply with the wastewater quality standards as stated in Appendix I and Appendix II as an integral part of this Ministerial Regulation."*

The wastewater quality standards stated in Appendix II of PerMen LH 11/2009 are as follows:

Table 2. Wastewater Quality Standards

Parameter	Maximum Content (mg/L)	Maximum Pollution Load (gram/head /day)
BOD	100	20

[8] Elly Kristiani Purwendah and Eti Mul Erowati, "Polluter Pays Principle in an Indonesian Legal System", Jurnal Pendidikan Kewarganegaraan Indonesia 9 no. 2 (2014): 342, https://doi.org/10.23887/jpku.v9i2.34137

[9] Didi Saidi, Maryana, and Ika Wahyuning Widiarti, Management of Cattle Waste, (Yogyakarta: Penerbit LPPM UPN Veteran Yogyakarta, 2022), iii.

COD	200	40
TSS	100	20
HN3-N	25	5
pH	6-9	
Maximum wastewater quantity	200 ltr/head/day	

In order to meet these wastewater quality standards, every cattle farm is required to have a Wastewater Treatment Plant (WWTP). WWTP is a wastewater treatment system that is useful in removing wastewater contaminants before it is discharged into the environment. Thus, before discharging the water that has been treated trough the WWTP system, business actors also need to ensure that the wastewater has complied with the wastewater quality standard mandated by the law. The proper procedures for wastewater disposal in accordance with the wastewater quality standards is by bringing samples to the laboratory for checking. It is also a form of commitment from business actors and the fulfilment of the PerMen LHK RI P.102/MENLHK/SETJEN/KUM.1/11/2018 which requires information on the description of the WWTP system as a prerequisite for issuing wastewater discharge permits.

WWTP is divided into 3 types based on the designation or source of wastewater:[10]

1. Communal WWTP, located in an area and shared by a settlement;
2. Self-made WWTP, built according to the specific needs of the building or family;
3. Industrial WWTP, made to treat wastewater from industrial activities, factories, and other sectors.

In the Greenfields case, the Panel of Judges ordered Greenfields to build a WWTP. Thus, when applied to this case, Greenfield Indonesia needs to establish an industrial WWTP, given the large scale of its cattle farms that accommodate thousands of cattle.

When it is reviewed based on normative perspective, the government has established various legal instruments to facilitate cattle farms in carrying out its activities. The government regulations have been designed in such a way and clearly to avoid environmental pollution that can be caused by cattle farming. Thus, it can be concluded that normatively, it has reflected the purpose of law as proposed by Gustav Radbruch that law formation must guarantee the interests of the people and law enforcement must be able to create justice, benefit, and legal certainty:

1. Justice

Justice is a concept that refers to balance, equality, and fair treatment regardless of race, religion, gender, and social status.[11] Hence, all people are equal before the law. The articles contained in the UUPPLH reflect the justice principle of the theory of legal objectives by Gustav Radbruch. This is because the articles in this law include the entire community without exception to take part in various matters. It can be seen from various articles in the UUPPLH, such as in Article 25 and Article 26, which provide opportunities and involve the community in providing responses to the plan of a business and/or activity. Thus, UUPPLH provides justice for cattle farms as business actors who can get profit from their activities or businesses and for the community to get a habitable environment without pollution.

2. Legal Benefits

In terms of legal benefits, UUPPLH has provided many benefits to the environment through prevention to minimize pollution and damage. Through the regulations, such as regulations regarding permits to process hazardous and toxic waste, waste dumping permits, business actors cannot directly dispose of and process waste. They must first obtain permission from the authorized institution and through supervision carried out by the institution. Compliance with the existing permits and provisions can be realized along with the realization of legal benefits itself.

3. Legal Certainty

[10] Bagaskara, "Types and Benefits of Wastewater Treatment Plants (IPAL)," https://mutucertification.com/instalasi-pengolahan-air-limbah/, " retrieved on January 31st, 2024

[11] Maksum Rangkuti, "What is Justice in Law?", https://fahum.umsu.ac.id/apa-itu-keadilan- dalam-hukum/, retrieved on February 2nd, 2024

Legal certainty is useful to ensure peace and order through law enforcement. Based on the analysis, UUPPLH has fulfilled legal certainty because it has clearly regulated its law enforcement, for example through administrative, civil, and criminal liabilities.

Although the existing regulations are in accordance with the theory of legal objectives, the lack of public awareness, business actors' awareness, and the roles of the government in implementing and enforcing the applicable law hinder the realization of the theory of legal objectives. As presented in Table 1 that there are many business actors who do not pay attention to environmental pollution due to the waste produced. Furthermore, the lack of decisive action from the government is also one of the obstacles to the realization of the legal objectives as suggested by Radbruch because the government only gave a written warning without administrative sanctions. One of the example is in the case of Greenfields Indonesia. Warning without action only results in defiance from Greenfields Indonesia as the perpetrator.[12]

Liability of Cattle Farming Businesses that Conduct Improper Waste Disposal

The theory of legal liability analyses the responsibility of legal subjects or perpetrators who have committed PMH or criminal acts to bear costs or losses or carry out criminal penalties for their mistakes or negligence.[13] Article 1 point 32 of UUPPLH states "*Every person is individual or business entity, both legal and non-legal entities*." According to this definition, it can be seen that the subject of UUPPLH is very broad because it includes individuals and business entities that are legal or not. Based on the explanation of Article 1 point 32 of UUPPLH, it can be seen that the subject covers not only people, but also organizations, corporations, companies, government and private organizations.

Environmental law enforcement is an effort to achieve compliance with regulations and requirements in applicable legal provisions in general and individually through supervision and application of administrative, civil and criminal liabilities.[14]

1. Administration Liability

The mechanism of initial sanction in UUPPLH is the imposition of administrative sanctions. In essence, environmental management should be based on prevention rather than restoration. It is also known as a preventive measures. This preventive measures are manifested in the form of supervision by the authorized apparatus in the environmental sector.[15] The Minister of Environment and local government are supervisory agents who authorize and assign environmental supervisory officials. This institution will conduct supervision by visiting the business site (related companies) to check the compliance of business actors in carrying out their activities.[16]

Administrative liability is usually given to cattle farms that operate without environmental permits, such as those without wastewater discharge permits, no AMDAL, etc. Berge provides an explanation of the functions of license, which are:[17]

1. To lead (controlling);
2. Preventing hazards that may occur in the environment;
3. Protecting specific objects;
4. Dividing a small number of objects;
5. Directing by selecting activities.

With the possibility of violations and non-realization of the function of granting permits above, UUPPLH introduces 4 (four) types of sanctions in environmental administrative law. These sanctions can be imposed by authorized institutions without going through the judicial process first. These sanctions are listed in Article 76 paragraph (2) which consists of:

a. Warning letter
b. Government coercion

Types of coercion conducted by the government under Article 80 paragraph (1) of UUPPLH consist of temporary suspension of production activities, removal of production facilities, closure of waste water or emission disposal channels, demolition,

[12] Ayu Nurfaizah, 15

[13] Salim HS and Erlies Septiana Nurbani, *The Application of Legal Theory in Dissertation and Thesis Research,* (Jakarta: Rajawali Pres), 7

[14] Komang Trie Krisnasari and I Ketut Mertha, "*The Implementation of Law Number 32 of 2009 on Environmental Protection and Management in Efforts to Enforce Environmental Law in Indonesia,"Kertha Semaya: Jurnal Ilmu Hukum* 1 no. 3 (2013): 1, https://ojs.unud.ac.id/index.php/kerthasemaya/article/download/5354

[15] Takdir Rahmadi, *Environmental Law in Indonesia*, (Depok: Rajawali Pers, 2019), 221

[16] Mesi Shinta Dewi, *ibid*

[17]Ahmad Basuki, "*Criminal Liability of Officials for Maladministration in the Issuance of Environmental Permits*", Jurnal Perspektif XVI no. 4 (2011): 253

confiscation of goods or equipment that have the potential to cause violations; temporary suspension of all activities; or other actions aimed at stopping violations and actions to restore environmental functions. Generally, government coercion must be preceded by a warning letter. However, this step can be waived if there is a serious threat or greater impact from the activity.

c. Suspension of environmental license

Suspension of environmental license is carried out when the person in charge of the business/activity does not follow the executive coercion. Thus, if the person in charge of the business/activity has implemented executive coercion, sanctions in the form of license suspension are no longer necessary.

d. Revocation of environmental license

Similar to the suspension of environmental license, the revocation of environmental license is carried out when the person in charge of the business/activity does not follow the executive coercion.

Thus, the application of administrative sanctions is the initial sanction given to business actors to stop the impact of pollution or damage that occurs. However, based on the example of the Greenfields Indonesia case, it can be seen that the applicable administrative sanctions has not been conducted by the cattle farming business actors and the government itself. It can be seen from the ineffectiveness of administrative sanctions in the form of warnings given to Greenfields Indonesia. The reprimand given to Greenfields was only considered frivolous so that no effort was made and the government did not follow up on the administrative sanctions to impose.

2. Civil Liability

A. Unlawful Acts (PMH)

PMH is an act against laws and regulations, norms, subjective rights, and against decency. PMH emphasizes liability based on fault. PMH itself is regulated in Article 1365 of the Civil Code. Greenfields case fulfilled the elements of PMH as follows:

a. Proven act

Greenfields Indonesia was dumping cow manure into the river around residential areas at night or during heavy rains. This clearly violates existing regulations and the rights of the community to have a good and healthy living environment.

b. Unlawful acts

The act of dumping cow manure directly into the river by Greenfields is an act that violates the obligation to treat the waste as stated in Article 59 of the UUPPLH and Article 6 of PerMen LH 11/2009. Moreover, the actions taken by Greenfields also violated the subjective rights.

c. Proven fault

The actions taken by Greenfields were intentional. It can be proven that Greenfields did not have licenses in waste treatment and the non-provision/non-optimization of the use of WWTP. In addition, Greenfields also disposed of waste at night or during heavy rains, indicating that these actions were planned.

d. Necessary losses

Greenfields had made the community suffered various losses such as the inability to use river water, not to mention foul odor from their farms. It then caused the locals to file a class action lawsuit against Greenfields.

e. Causal relationship

Due to the unlawful act committed by Greenfields Indonesia, the locals were unable to use the river water and foul odor was emitted from their farms which disturb the surrounding settlement. If Greenfields had not committed this act, the locals would not have suffered losses. Therefore, it can be seen that there is a causal relationship between the actions of Greenfields and the losses experienced by surrounding villagers.

Furthermore, Article 87 paragraph (1) of UUPPLH reads:

> "*Any unlawful act in the form of pollution and/or destruction of the environment that causes harm to others or the environment, requires the person in charge of the business and/or activity to pay compensation and/or take certain actions*."

Furthermore, Article 1366 of the Civil Code also regulates the liability of the perpetrator:

> "*Every person is liable not only for damages caused by his actions, but also for damages caused by his negligence or carelessness*."

Based on these two articles, it can be seen that the Law requires the perpetrator of PMH to be responsible for the losses due to their actions or negligence as a manifestation of the Polluter Pays Principle. There are several types of claims that can be filed in PMH liability as follows:

1. Compensation in the form of money for losses incurred;
2. Compensation in the form of restoration to the original condition;
3. A statement that the act committed is unlawful;
4. Prohibit certain conducts.

In this case, Greenfields Indonesia was sued for PMH and paid monetary compensation of 24.2 billion. However, in decision number 77/Pdt.G/LH/2021/PNBlt, the Panel of Judges did not grant monetary claims for the community. The decision of the Panel of Judges stated that Greenfields Indonesia committed PMH and was ordered to build a WWTP in accordance with its business capacity.

B. Strict Liability

Strict Liability was first recognized from England and adopted from the decision to Rylands v. Fletcher in 1866. In the Rylands v. Fletcher decision, strict liability is defined as those who commit acts that have certain risk, bear responsibility for losses that occur when the risk occurs, unless it is proven that the loss arises due to the fault of a third party, due to vis major, or due to natural disasters.[18]

In Indonesia, strict liability was first recognized through an international convention, Civil Liability Convention for Oil Pollution Damage (CLC) in 1969, which was then ratified through Presidential Decree number 18 of 1978. Until now, provisions regarding strict liability are still contained in the applicable UUPPLH, specifically in article 88 which reads:

> *"Every person whose actions, business, and/or activities use hazardous waste, produce and/or manage hazardous waste and/or pose a serious threat to the environment is absolutely responsible for the losses incurred without the need to prove the element of fault."*

This article clearly states the limitation of the strict liability to activities that use, generate, and or manage hazardous waste. Based on the results of the research, cattle farms produce methane gas which has explosive properties, so it can be categorized as B3 waste and requires prior treatment. This is in line with Judge Blackburn's decision stating that hazards may take the form in animals, water, waste, or rocks.[19]

In terms of civil liability, many people have misconception about liability based on PMH and strict liability. This is because strict liability is still not taught as one of the grounds for a lawsuit, so students or practitioners still do not understand how to file a lawsuit or decision that contains strict liability.[20] Thus, strict liability is still considered to be included in PMH.[21] In fact, the explanation of Article 88 of the UUPPLH states that the meaning of absolute responsibility or strict liability is that the element of fault does not need to be proven by the plaintiff as a basis for granting compensation. This means that the defendant must prove that the environmental pollution or damage was not due to their fault or negligence. This is a *lex specialise* of Article 1365 of the Civil Code regarding PMH. So far, the fulfilment of the elements of PMH is still the determining factor for the liability of the perpetrator of environmental pollution.

Here are the differences between PMH and strict liability:

Table 3. Differences between PMH and Strict Liability

PMH	Strict Liability
Acts against the law	Acts not against the law, but in breach of duty or prudence
There is an element of fault	No element of fault

[18] Sukanda Husin, *Indonesian Environmental Law Enforcement*, (Jakarta: Sinar Grafika), 106- 188

[19] *Ibid*

[20] Andri Gunawan Wibisana, *Environmental Law Enforcement Through Civil Liability,* (Depok: Badan Penerbit Fakultas Hukum Universitas Indonesia, 2017), 122

[21] *Ibid*

Proof of the element of fault: 1. Proven acts; 2. Unlawful acts; 3. Necessary losses; 4. Proven fault; 5. Causal relationship	It is not necessary to prove the element of fault, but rather verify that:[22] 1. Defendant has carried out an activity; 2. Plaintiff has suffered loss; 3. Losses were caused by the defendant's activities (factual evidence "but for" or "*sine qua non*"

Based on the decision in the case of Greenfields Indonesia, the plaintiffs could not only sue through PMH. Greenfields Indonesia could be held liable for its polluting acts due to the fulfilment of the following elements of strict liability:

The defendant has carried out an activity Greenfields Indonesia, a company engaging in dairy production, had polluted the environment by disposing of cow manure, which had negative impacts on the environment. This can be interpreted that Greenfields Indonesia has violated the obligations and precautionary principles in the UUPPLH. As previously stated, that cattle farm waste is categorized hazardous, meaning that Greenfields Indonesia also conducted hazardous activities.

a. The plaintiff has suffered loss

The plaintiffs constitute 243 families who were farmers, fish and goat farmers, and users of river water. The waste pollution caused the river water used by the plaintiffs for various needs to become muddy and smelly and polluted the water source in the neighbourhood.

b. The loss caused by the defendant's activity

The villagers' loss was the inability to use river water because it was polluted by cow manure.

Thus, the elements of strict liability in the Greenfields Indonesia case was met. However, it is unfortunate that as far as this research conducted, Greenfields Indonesia was not sued on the basis of strict liability.

3. Criminal Liability

Environmental offenses are orders and prohibitions from the law to legal subjects that will be imposed with criminal sanctions, such as imprisonment and fine.[23] The imposition of these sanctions is to realize the protection of the environment as a whole including its elements. Article 100, paragraph (1) of UUPPLH regulates the imposition of criminal sanctions as follows:

> *"Every person who violates the wastewater quality standard, emission quality standard, or nuisance quality standard shall be punished, with imprisonment for a maximum of 3 (three) years and maximum fine of 3,000,000,000.00 (three billion rupiahs)."*

The imposition of criminal sanctions is an ultimatum remedial that only applies to several formal criminal offenses in the form of violations of wastewater quality standards, emissions, and nuisance.

Furthermore, the imposition of environmental criminal sanctions is also contained in Article 103 of UUPPLH which reads:

> *"Every person who generates B3 waste and does not carry out management as referred to in Article 59, shall be punished with imprisonment for a minimum of 1 (one) year and a maximum of 3 (three) years and a fine of at least 1,000,000,000.00 Rupiah (one billion rupiahs) and a maximum of 3,000,000,000.00 Rupiah (three billion rupiahs)."*

In addition, Article 104 of UUPPLH which regulates criminal sanctions for waste dumping activities:

> *"Every person who conducts dumping of waste and/or materials into environment without a permit as referred to in Article 60, shall be punished with imprisonment for a maximum of 3 (three) years and a maximum fine of Rp 3,000,000,000.00 (Three billion rupiahs)."*

Regarding Greenfields Indonesia case, these articles can be used as the basis for a criminal lawsuit against Greenfields Indonesia. However, as long as the company is cooperative in carrying out the decision of the Panel of Judges in decision number 77/Pdt.G/LH/2021/PNBlt, then this criminal suit is no longer needed unless the act is repeated by Greenfields Indonesia.

[22] Sukanda Husin, 148
[23] Takdir Rahmadi, 232

IV. Conclusion and Suggestions

Based on the results of research and analysis, the following conclusions can be drawn:

1. Provisions regarding the disposal of cattle farm waste have been regulated by various legal instruments such as UUPPLH, PP 22/2021, PerMen LH 11/2009, and regional laws fulfilled the 3 (three) objectives of law proposed by Gustav Radbruch, which were justice, benefit, and legal certainty. However, these regulations faced various obstacles in terms of human resources from the government and business actors. Therefore, the implementation of these regulations was still lacking and caused environmental pollution due to cattle farms still occurring.
2. Environmental pollution due to cattle farming could be held liable, either based on administrative, civil, or criminal perspectives. Civil liability against cattle farms could not only be sued on the basis of PMH, but also on the basis of strict liability because cattle farms produced waste that included hazardous waste as regulated in Article 88 UUPPLH.

There are several suggestions that arise from this research, including:

1. The government must be more assertive in implementing regulations for cattle farming by taking into account the requirements and ensuring that business actors are truly committed to preserving the environment. The government must also conduct regular supervision and emphasize sanctions, so that cattle farmers are aware of the environmental problems that may arise from their business.
2. Cattle farming businesses also need to be aware of environmental pollution from their activities by completing administration and providing WWTPs in accordance with their business capacities.
3. For technology developers, they can develop and create qualified technology to facilitate business actors in processing cattle farm waste.

References

[1] Ahmad Basuki, "Criminal Liability of Officials for Maladministration in the Issuance of Environmental Permits", Jurnal Perspektif XVI no. 4 (2011): 253, 10.30742/perspektif.v16i4.88
[2] Andri Gunawan Wibisana, Environmental Law Enforcement Through Civil Liability, (Depok: Badan Penerbit Fakultas Hukum Universitas Indonesia, 2017)
[3] Ayu Nurfaizah, "Environmental Pollution by PT Greenfields Indonesia", Research Report, East Java: Walhi and Global Forest Coalition, 2023, 15-16
[4] Bagaskara, "Types and Benefits of Wastewater Treatment Plants (IPAL)," https://mutucertification.com/instalasi-pengolahan-air-limbah/, accessed on January 31st, 2024
[5] Central Bureau of Statistics, "Number of Villages/Subdistricts by Type of Environmental Pollution (Villages), 2014-2021", https://www.bps.go.id/indicator/168/959/1/banyaknya-desa-kelurahan-menurut- jenis-pencemaran-lingkungan-hidup.html, accessed January 31st, 2024
[6] Didi Saidi, Maryana, and Ika Wahyuning Widiarti, Management of Cattle Waste, (Yogyakarta: LPPM UPN Veteran Yogyakarta Publisher, 2022)
[7] Elly Kristiani Purwendah and Eti Mul Erowati, "Polluter Pays Principle in an Indonesian Legal System," Indonesian Citizenship Education Journal 9 no. 2 (2014): 342, https://doi.org/10.23887/jpku.v9i2.34137
[8] Erlina F. Santika, "Where Are the Largest Sources of Global Methane Emissions?"". https://databoks.katadata.co.id/datapublish/2023/03/17/dari-mana-sumber-terbesar-emisi-gas-metana-dunia, accessed February 1st, 2024"
[9] Fauzul Romansah, "Law Enforcement Against Pollution from Beef Cattle Farming Waste," Administrative and Environmental Law Review 1 no. 1 (2020): 29, 10.25041/aelr.v1i1.2081
[10] Government Regulation Number 22 of 2021 concerning Implementation of Environmental Protection and Management
[11] Komang Trie Krisnasari and I Ketut Mertha, "The Implementation of Law Number 32 of 2009 on Environmental Protection and Management in Efforts to Enforce Environmental Law in Indonesia," Kertha Semaya: Jurnal Ilmu Hukum 1 no. 3 (2013): 1, https://ojs.unud.ac.id/index.php/kerthasemaya/article/download/5354
[12] Law Number 32 of 2009 concerning Environmental Protection and Management
[13] Law Number 39 of 1999 concerning Human Rights
[14] Maksum Rangkuti, "What is Justice in Law?"", https://fahum.umsu.ac.id/apa-itu-keadilan-dalam-hukum/, accessed February 2nd, 2024
[15] Mesi Shinta Dewi, Sub Koordinator Penataan dan Penerapan Sanksi Administratif, Dinas Lingkungan Hidup, Kota Tangerang, Interviewed on November 15th, 2023, at 09.20 WIB.
[16] Regulation of the Minister of Agriculture Number 14 of 2020 concerning Registration and Licensing of Livestock Businesses
[17] Regulation of the Minister of Environment and Forestry Number P.102/MENLHK/SETJEN/KUM.1/11/2018 of2018 concerning Procedures for Licensing Waste Water Disposal through Electronically Integrated Business Licensing Services
[18] Regulation of the Minister of Environment Number 11 of 2009 concerning Waste Water Quality Standards for Cattle and Pig Farming Businesses and/or Activities
[19] Salim, HS and Erlies Septiana Nurbani, The Application of Legal Theory in Dissertation and Thesis Research, (Jakarta: Rajawali Pres, n.d)

[20] Sella Dzuikhija, "The Issue of Livestock Activities as the Largest Contributor to Global Warming – The Dilemma Between Efforts to Increase Animal Food Productivity and the Environmental Love Movement", https://gc.ukm.ugm.ac.id/2017/07/isu-kegiatan-peternakan-sebagai-penyumbang-terbesar-pemanasan-global-dilema-antara-usaha-peningkatan-produktivitas-bahan-pangan-hewani-dan-gerakan-cinta-lingkungan/, accessed January 31st, 2024
[21] Sukanda Husin, Environmental Law Enforcement in Indonesia, (Jakarta: Sinar Grafika)
[22] Takdir Rahmadi, Environmental Law in Indonesia, (Depok: Rajawali Pers, 2019)
[23] The 1945 Constitution of The Republic of Indonesia
[24] Widianti Pratiwi, "Waste is Just Left to Pile Up, Undip KKN Students Conduct Socialization on Introducing Cattle Waste Processing Methods in Tegalkuning Village", http://kkn.undip.ac.id/?p=286105#:~:text=The%20solid%20waste%20produced%20from,water%20used%20to%20clean%20farm%20equipment, accessed January 31st, 2024