

Legal Responsibility for Perpetrators of Burning Electronic Component Waste in Open Spaces

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ABSTRACT

Environmental pollution, especially caused by the open burning of waste electronic components, is very dangerous to the environment and living things. In addition, electronic waste has various forms, so there is a need for environmental legal regulations that regulate electronic waste specifically. The research method in this study uses a normative juridical research type, with a statute approach and a concept approach. The primary legal material used is Law Number 32 of 2009 concerning Environmental Protection and Management. From the results of the research carried out, it can be concluded that; First, that the legal basis for environmental pollution due to the open burning of electronic component waste refers to Government Regulation Number 101 of 2014 concerning the Management of Hazardous and Toxic Materials Article 5 Paragraph (2) because this type of waste should not be disposed of carelessly because the content in it can damage the environment. That for the management of electronic component waste, it must be carried out by a licensed and certified institution from the Ministry of Environment and Forestry Second, that legal sanctions against the perpetrators of the disclosure of electronic component waste include administrative sanctions that do not exempt the person in charge of the business and activity from the responsibility for recovery, civil sanctions are aimed at every person in charge of the business or activity that violates the law in the form of environmental pollution, criminal sanctions resulting from exceeding ambient air quality standards, water quality standards, seawater quality standards or deliberate environmental damage, because the effects of open burning due to electronic component waste are very harmful to the environment.

Keywords: Legal Sanctions, Open Incineration, Waste Electronic Components

Introduction

Along with the increasing advancement of technology, the quality of the environment is decreasing. The decreasing quality of the environment has a major impact on humans, especially related to environmental values in the context of health, welfare, and tranquility. This causes environmental values that should support the utilization of various uses to be lost or decreased due to excessive human exploitation in their use.¹

The decline in environmental quality can be caused by a terrible natural disaster, for example, a volcanic eruption, earthquake, landslide, and so on, to environmental pollution caused by human actions. Law of the Republic of Indonesia Number 32 of 2009 concerning Environmental Protection and Management, Chapter I Article 1 Paragraph (14) states that environmental pollution is the entry or introduction of living creatures, substances, energy, or other components into the environment by human activities so that they exceed the environmental quality standards that have been set.² One of the environmental pollutions in Indonesia is caused by the open burning of electronic component waste.

Until now, many people are not aware of the risks of electronic waste. Because they want to keep up with technological developments, people often abandon obsolete electronic devices to switch to new ones with more modern features. For example, every year there is the emergence of the latest cellphone models from various brands. The high demand for these electronic goods has resulted in an increasing amount of uncontrolled electronic waste.³

Open burning of electronic component waste or e-waste is a serious problem that is closely related to environmental and human health impacts. This practice generally occurs in areas where there is no adequate e-waste management system. E-waste refers to electronic or electrical equipment that is obsolete or no longer functional and ready to be replaced with more

¹ Ma'ruf, Aspek Hukum Lingkungan Hidup Dalam Upaya Mencegah Terjadinya Kerusakan Dan Pencemaran Lingkungan Hidup Di Indonesia, Wacana Hukum: Jurnal fakultas Hukum Universitas Slamet Riyadi, 2018, Vol.XXIII, No.1, h. 39.

²Dewata, Pencemaran Lingkungan. Rajawali Press. 2018. h.2

³ Djafar, Dampak Dari Pencemaran Lingkungan Akibat limbah Elektronik Dalam Prespektif Hukum Lingkungan, Journal of Comprehensive Science, 2023, Vol. 2 No. 6, h. 1639.

sophisticated and advanced devices.⁴ These unused items become used goods that need to be disposed of, whether intact or damaged. E-waste includes batteries, electrical cables, incandescent bulbs, mobile phones, televisions, irons, and other electronic devices that are commonly used in everyday life.

The concern about the increasing amount of electronic waste is its impact on human health which is increasingly disturbed, especially on environmental damage. Uncontrolled disposal and management of electronic waste has the potential to hurt living things, including humans, animals, and plants. In addition, such actions can also pollute the soil, water, and air. Electronic waste includes various types, such as electric cables, batteries, mobile phones, televisions, cameras, irons, dispensers, computer devices, fans, washing machines, and others. Only about 20% of electronic waste is successfully recycled, while the rest is burned, buried, or dumped into water. This practice causes environmental pollution.

Air pollution, according to the World Health Organization (WHO), occurs when the process of burning electronic waste occurs, producing air pollution due to substances such as lead and hydrocarbon gases contained in electronic devices. Exposure to these substances can disrupt the brain's nervous system and cause various diseases such as seizures, infertility, and even potentially death. According to Wang, burning e-waste produces emissions of toxic gases and fine particles that hurt air quality and human health. Wang emphasized the importance of effective waste management policies to reduce the negative impacts of burning e-waste.⁵ In line with this opinion, Agarwal stated that the lack of awareness about the adverse effects of e-waste burning is the main cause of this practice. Agarwal highlighted the need for better education on e-waste management and the implementation of strict policies related to e-waste handling.⁶

In environmental law in Indonesia, there are two groups of relevant laws and regulations. First, sectoral regulations that are closely related to

⁴Josua Jonny Hardianto Banjar Nahor, Implikasi Dan Pengelolaan Limbah Elektronik, Jurnal Buletin Utama Teknik, 2019, vol. 14, No. 2, h. 116.

⁵ Wang L. Environmental Impacts of Open Burning of Electronic Waste, A Review." Environmental Science Journal, 25(4), 2020. h. 567-580.

⁶Agarwal, R. The Electronic Waste Crisis. Balancing Technological Innovation with Environmental Preservation. *Journal of Environmental Studies*, 15(2), 2019, h. 205-218.

environmental management in areas such as mining, forestry, and irrigation. Second, specific regulations regarding environmental management and protection, such as Law Number 32 of 2009 on Environmental Management and Protection. Environmental law is a multidisciplinary legal field that has three main aspects: criminal, civil, and administrative. However, in the context of this study, the focus will be on the general aspect of environmental law, environmental law is the law that relates to the natural environment in the broadest sense.

Research methods

The type of legal research used is normative juridical, according to Piter Mahmud Marzuki, normative juridical legal research is a process to find a legal rule, legal principles, or legal doctrines to answer the legal problems faced. Normative legal research is carried out to produce arguments, theories, or new concepts as a presupposition in the problems faced.⁷

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and the conceptual approach begins with views and principles developed in legal science. By studying the views and doctrines in legal science. Researchers will find ideas that give birth to legal understandings, legal concepts, legal principles that are relevant to the issues faced.⁹

Results and Discussion

Burning in Open Spaces

Open burning is an environmentally unacceptable process because it produces chemicals, although at first glance it looks practical and the waste disappears immediately, open burning can be harmful to health in the long term. Air polluted by smoke from open burning can be inhaled by

⁷Piter Mahmud Marzuki (Piter Mahmud I). *Penelitian Hukum*. Edisi Revisi. Kencana Prenada Media Group. Jakarta. 2005. h. 47.

⁸ibid. h.133

⁹ibid.h. 135

humans and animals, electronic waste management is very different from household waste in general.¹⁰

Government Regulation Number 27 of 2020 concerning the management of specific waste (e-waste) can be done by reducing and handling specific waste. Among them, reduction can be done by limiting the generation of specific waste, recycling specific waste, and reusing specific waste, while handling specific waste can be done by sorting, collecting, transporting, managing and final procedure.¹¹

The risks associated with burning electronic waste involve emissions of gases and particles related to pollutants (metals and organic compounds) through exhaust gases, as well as cleaning pollutants from residual ash. Several studies have shown that burning electronic waste leads to the substantial formation of dichlorinated and brominated, as well as brominated-chlorinated mixtures. The incineration of e-waste, especially when carried out under uncontrolled conditions, can lead to the emission of various hazardous substances.¹²

In addition, it has the potential to pose a risk to humans and the environment directly exposed to the emissions and also contributes to the global spread of compounds. Even if the results show that e-waste can be incinerated efficiently in modern facilities, with relatively low emissions, this is no longer an available option in many countries due to regulations requiring recycling of the material. In the European Union, the recycling and recovery quotas set by the e-waste directive, ranging from 50-70% for recycling and 70-80% for recovery, cannot be achieved without including combustible fractions such as plastics in the recovery or recycling system. On the other hand, incineration with energy recovery is a good alternative when other recycling techniques are not possible.

For example, the residual fraction, and can also be considered a

¹⁰ Tjahjani, Joejoen, Ulil Albab, and R. D. Wulandari. "Downstreaming of Oil And Gas From Environmental Legal Aspects in Indonesia." *Jurnal Independent* 12, no. 1 (2024), h. 102.

¹¹ Tjahjani, Joejoen, Fajar Seto Nugroho, and Fatma Indah Fitriana. "C Community Law Inclusivity in Energy Transition Regulation in Indonesia." *Jurnal Independent* 13, no. 1 (2025), h.5

¹² Tjahjani, Joejoen, Hadziqotun Nahdliyah, and Dinda Ayu Dwi Erarti. "Solar Vehicles From Environmental Law Perspective." *Jurnal Independent* 10, no. 2 (2022), h. 126.

complement to mechanical plastic recycling.¹³ Health impacts on humans, emissions from incineration processes can result in respiratory and lung effects including decreased lung function and inflammatory and immune responses, cardiovascular effects including inflation and increased cardiovascular mortality, genotoxic effects, reproductive effects, and estrogenic effects.

Legal Sanctions for Burning Electronic Component Waste in Open Spaces

a. Administrative Sanctions

Administrative sanctions imposed by the government on companies that pollute the environment due to their actions, in this case, have an instrumental function, namely the prevention, and handling of prohibited acts that are primarily aimed at protecting the interests of the community by the law that has been violated.

Administrative sanctions do not exempt those responsible for businesses and activities from responsibility for recovery and criminal penalties. The application of administrative sanctions is carried out by the minister, governor, or regent/mayor as has been emphasized in Law Number 32 of 2009 concerning environmental protection and management, article 76, which states;

- 1) The minister, governor or regent/mayor shall determine administrative sanctions for those responsible for businesses and/or activities if during supervision violations of environmental permits are found..
- 2) Administrative sanctions consist of;
 - a) Written warning
 - b) Government coercion
 - c) Suspension of environmental permits
 - d) Revocation of environmental permits

Administrative sanctions as referred to in Article 76 do not release the person responsible for the business and/or activity from recovery and criminal responsibility. The imposition of administrative sanctions in the form of freezing or revocation of environmental

¹³ Dino Rimanto. *Pengelolaan Limbah Elektronika*. Ipb Press.Bogor. 2019. h. 87

permits as referred to in Article 76 paragraph (2) letters c and d is carried out if the person responsible for the business and/or activity does not carry out government coercion.

b. Civil Sanctions

The civil sanctions are in the form of compensation sanctions for residents or local residents who are harmed due to pollution carried out by an industry and this is regulated in Law Number 32 of 2009 concerning Environmental Protection and Management, Article 87, which states;

- a) Every person responsible for a business or activity who commits an unlawful act in the form of environmental pollution and destruction that causes losses to other people or the environment is obliged to pay compensation and take certain actions.
- b) Every person who transfers, or changes the nature and form of a business, and/or activities of a business entity that the law does not release from legal responsibility and/or obligations of the business entity.
- c) The court may determine the payment of a fine for each day of delay in the implementation of the court decision.
- d) The amount of the fine is decided based on statutory regulations.

The application of civil witnesses as referred to in the article above is intended for every person in charge of a business and/or activity that commits an unlawful act in the form of pollution and/or destruction of the environment that causes harm to other people or the environment is obliged to pay compensation and/or take certain actions. Likewise, every person or business entity that transfers, changes the nature and form of the business, and/or activities of a business entity that violates the law does not release legal responsibility.

c. Criminal Sanctions

The criminal sanctions imposed in this case, whether intentional or not, which in this case have exceeded the limits of environmental pollution, are regulated in Article 98 paragraph (1) of the Law on Environmental Protection and Management, which states:

Article 98 paragraph (1)

“Any person who intentionally commits an act that results in exceeding ambient air quality standards, water quality standards, sea water quality standards, or environmental damage criteria, shall be punished with imprisonment for a minimum of 3 (three) years and a maximum of 10 (ten) years and a fine of at least Rp. 3,000,000,000.00 (three billion rupiah) and a maximum of Rp. 10,000,000,000.00 (ten billion).“

The objective element of the article above is "carrying out an act that results in exceeding the ambient air quality standard, water quality standard, seawater quality standard, or environmental damage quality standard criteria". The meaning of "act" here can be any act as long as the act is the cause of the occurrence of the effect in the form of exceeding the ambient air quality standard, water quality standard, seawater quality standard, or environmental damage standard criteria.

Conclusion

Administrative law is a legal action taken by the government to impose responsibility, provide direction, or cancel administrative decisions. Civil law can be said to be a type of settlement carried out through environmental mediation. The legal consequences of environmental mediation are often regulated in a written agreement regulated in the terms of the Civil Code and are considered to have the same legal force as a contract. Criminal law is the final legal action imposed on those who commit crimes involving environmental pollution and damage. Individuals, companies, or commercial entities can be the objects of environmental crime law.

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