

TYPE: RESEARCH ARTICLE/REVIEW ARTICLE

# Enforcement of Human Rights through Criminal Law Against Environmental Destruction Due to Batik Industry Activities

Rayhan Fiqi Fansuri<sup>1</sup>, Juan Matheus<sup>2</sup>✉

<sup>1,2</sup> Faculty of Law, Tarumanagara University, Jakarta Barat, DKI Jakarta, Indonesia

✉Corresponding Email: [aryofadlian@fhunsika.ac.id](mailto:aryofadlian@fhunsika.ac.id)

## Citation

Fansuri, R.F. Matheus, J. (2022). Enforcement of Human Rights through Criminal Law Against Environmental Destruction Due to Batik Industry Activities. *IJCLS (Indonesian Journal of Criminal Law Studies)*, 7(2), 291-316

## History of Article

Submitted: 30 June 2022

Revised: 25 August 2022

Accepted: 15 November 2022

## About Author(s)

Please describe all authors biographies, including the current activities and working, expertise, publication, grant and award, and any important information for readers.

*IJCLS (Indonesian Journal of Criminal Law Studies)* published by the Faculty of Law, Universitas Negeri Semarang, Indonesia. Published biannually every May and November.

## ABSTRACT

Water as one of the basic needs must be maintained both in quality and quantity. However, the occurrence of pollution in watersheds due to the influence of wastewater quality that exceeds the quality standard of wastewater can affect the carrying capacity of the environment around the river which has an impact on the violation of community rights to a good and healthy environment. One example of river water pollution occurred in the Bengawan Solo River due to the activities of the batik cloth industry in the Laweyan area. The pollution of the Bengawan Solo River is due to the lack of strict legal rules governing violations of waste water quality standards so that river water pollution is rampant and of course violates human rights for a clean and healthy environment. Currently, the article that regulates the violation of waste water quality standards is regulated in Article 100 paragraphs (1) and (2) of the Law on Environmental Protection and Management. To suppress the occurrence of river water pollution which is a violation of human rights, strict rules are needed by applying the principle of *primum remedium*. The research method used in this paper is a normative juridical method

by examining secondary data with a statutory approach, a case approach, a conceptual approach, and a historical approach. For this reason, it is necessary to apply the principle of *primum remedium* to prevent river water pollution so that human rights for a good and healthy environment and obtain clean water can be enforced.

#### KEYWORDS

*Water Pollution, Human Rights, Primum Remedium, Batik Industry.*

Copyright © The Author(s). See our **Copyright Notice**



This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](#). All writings published in this journal are personal views of the authors and do not represent the views of this journal and the author's affiliated institutions.

## 1 INTRODUCTION

Water as one of the most basic need for life on earth, especially for humans. In the current modern era, the increasingly massive development accompanied by an increasing population makes the need for clean water increase and often does not meet human needs. In general, the unavailability of clean water can be caused by two factors, namely the first factor is caused by nature due to the formation of the area which is difficult to obtain water and the second factor from humans due to contamination of the clean water environment due to human activities <sup>1</sup>. Whereas as the main need, water must be used as much as possible for the prosperity of the people. This is in accordance with what has been mandated by Article 33 of the 1945 Constitution of the Republic of Indonesia (UUD NRI 1945) so that water sources need to be maintained both in quality and quantity.

Based on records from the Ministry of Environment and Forestry of the Republic of Indonesia in 2020, 59% of rivers have been heavily polluted from the total rivers in Indonesia due to the discharge of household wastewater and other river pollution activities and lowering the quality of river water. According to Jiao Ding in Muhammad Dawud, Idi Namara, Nurul Chayati, and Fadhilla Muhammad LT <sup>2</sup>, a decrease in water quality can occur as a result of human activities who do not care

---

<sup>1</sup> Dinarjati Eka Puspitasari, "Dampak Pencemaran Air Terhadap Kesehatan Lingkungan Dalam Perspektif Hukum Lingkungan (Studi Kasus Sungai Code Di Kelurahan Wirogunan Kecamatan Mergangsan Dan Kelurahan Prawirodirjan Kecamatan Gondomanan Yogyakarta)," *Jurnal Mimbar Hukum* 21, no. 1 (2009): 23–34, <https://doi.org/https://doi.org/10.22146/jmh.16254>.

<sup>2</sup> Muhammad Dawud et al., "Analisis Sistem Pengendalian Pencemaran Air Sungai Cisadane Kota Tangerang Berbasis Masyarakat," in *Prosiding Semnastek* (Fakultas Teknik Universitas Muhammadiyah Jakarta, 2016).

about the environment and are not indifferent to the principles of sustainable development. In big cities, the decline in the availability of clean water quality has been a problem for a long time due to environmental pollution, especially pollution in river water. The cause of river water contamination is not only from intentional or unintentional acts of human behavior, but from waste disposal activities from industrial household factories or large factories that simply dispose of their waste without processing it first. In addition, the dense population and poor environmental sanitation conditions plus waste from industrial activities which are directly discharged into waterways and rivers without processing have become a major cause of river water pollution in big cities<sup>3</sup>.

Pollution in watersheds (DAS) occurs due to the influence of wastewater quality that exceeds the quality standard of wastewater and the resulting wastewater discharge which can affect the carrying capacity of the environment around the river. Currently, most rivers in Indonesia are not healthy or polluted, even though the function of rivers for humans and the ecosystem in the river is very important. There are two main factors in the occurrence of water pollution, namely certain factors that come from the results of an industrial activity as well as from a domestic waste and uncertain factors that come from the results of residential, transportation, and agricultural activities<sup>4</sup>. To determine whether a river is polluted or not, it can be seen from the parameters of the chemical oxygen demand (COD) value, the biological oxygen demand (BOD) value, the phosphorus content in the river water and the acidity or pH value of the river water. If the COD and BOD values in a river exceed the standard, it can be said that the river is polluted and proves that there is a strong smell of river water and the color of the river water becomes pitch black.

One of the efforts to maintain and prevent pollution of the environment, especially in this case the contamination of rivers, is to carry out protection through law enforcement mechanisms for environmental crimes. Polluting rivers is a constitutional crime because the right to a healthy and good living environment belonging to the community which has been regulated in Article 28H of the 1945 Constitution of the Republic of Indonesia is disturbed. In fact, the right to a good and healthy environment is an inseparable part of human rights which have been

---

<sup>3</sup> Satmoko Yudo and Nusa Idaman Said, "Masalah Pencemaran Air Di Jakarta, Sumber Dan Alternatif Penanggulangannya," *Jurnal Teknologi Lingkungan* 2, no. 2 (2001): 199–206, <https://doi.org/https://doi.org/10.29122/jtl.v2i2.214>.

<sup>4</sup> Sri Septi Dyah Pratiwi, "Analisis Dampak Sumber Air Sungai Akibat Pencemaran Pabrik Gula Dan Pabrik Pembuatan Sosis," *Journal of Research and Education Chemistry* 3, no. 2 (2021): 122–42, [https://doi.org/https://doi.org/10.25299/jrec.2021.vol3\(2\).7774](https://doi.org/https://doi.org/10.25299/jrec.2021.vol3(2).7774).

regulated in the constitution to obtain a good living environment with all its ecosystems. The impact of environmental damage and contamination is the emergence of various kinds of diseases or health problems, air pollution, and other life disturbances for other people. Therefore, violating or destroying the environment means violating human rights. In addition, the violation of the right to a good and healthy environment is an environmental crime <sup>5</sup>.

In addition to being regulated in the constitution, environmental protection is regulated in Law Number 32 of 2009 concerning Environmental Protection and Management (PPLH Law). The PPLH Law is a regulation or legal umbrella for the protection of human rights over the environment, which is woven with the political, moral, and social commitment of environmental policy makers. Considering the river as one of the sources of water where water is the source of life, environmental protection is a matter that must be the main focus of law enforcement and violators of environmental destruction can be subject to sanctions that have been stated in the legislation. That way if there is damage or contamination of the environment, the party who is harmed by the incident can sue or sue. However, cases of river pollution still often occur in Indonesia, especially in rivers that are close to industry.

One example of a river pollution case is the contamination of the Bengawan Solo River and several tributaries due to the disposal of batik industry waste in Solo. In the Premulung and Jenes Laweyan rivers, the batik industry waste discharge exceeds the quality standard threshold. Pollution in the two rivers is even categorized as heavy pollution <sup>6</sup>. Head of Environmental Control and Management Division of the Environment Agency, Luluk Nurhayati, said that the contamination of the river by the batik industry waste was very worrying. The pollution caused the Bengawan Solo tributary to be contaminated with heavy metals. Luluk continued that the cause of river pollution in Solo is due to the behavior of residents and the existence of home industries that throw waste directly into the river and make the condition of the water around the river bad.

Acting Head of the Central Java Environment and Forestry Service (DLHK), Widi Hartanto said, there were 63 batik companies that had been supervised by the Central Java DLHK and four of them were threatened with criminal penalties for neglecting administrative sanctions <sup>7</sup>. Gibran Rakabuming Raka said that the pollution factor of several rivers in Solo was because the Waste Water Treatment

---

<sup>5</sup> Rochmani Rochmani, "Perlindungan Hak Atas Lingkungan Hidup Yang Baik Dan Sehat Di Era Globalisasi," *Masalah-Masalah Hukum* 44, no. 1 (January 2015): 18, <https://doi.org/10.14710/mmh.44.1.2015.18-25>.

<sup>6</sup> Arie Sunaryo, "Limbah Batik Dominasi Pencemaran Sungai Di Solo," *Merdeka.com*, 2017.

<sup>7</sup> Bayu Ardi Isnanto, "DLHK Jateng: 63 Industri Cemari Bengawan Solo, 4 Terancam Pidana," *detiknews*, 2021.

Plant (IPAL) in the batik industry did not run optimally. In line with that opinion, Alpha Fabela as Chair of the Laweyan Batik Village Development Forum said that some batik industries or batik production houses cannot be connected to the IPAL<sup>8</sup>. This confirms that environmental pollution, especially water pollution, does occur in the Jenes Laweyan River.

From the examples of cases as described previously, that the batik industry that pollutes rivers in Solo violates Article 100 paragraphs (1) and (2) of the PPLH Law which states, "Everyone who violates the waste water quality standard, emission quality standard, or disturbance shall be punished with imprisonment for a maximum of 3 (three) years and a fine of a maximum of Rp. 3,000,000. or the offense is committed more than once.". This article applies a principle called the *ultimum remedium*. Principle *ultimum remedium* states that criminal law should be used as a last resort in terms of law enforcement. By applying this principle, if there is a case or dispute, the settlement can be prioritized through deliberation (family), mediation, negotiation, civil and administrative<sup>9</sup>. Principle *ultimum remedium* in the PPLH Law applies to certain formal crimes such as violations of waste water quality standards, emissions, and disturbances that have been regulated in Article 100 of the PPLH Law.

By looking at the facts, the application of the *ultimum remedium* in the case of wastewater quality standards such as the example of the batik industry in Solo is considered less effective and does not provide a sense of deterrence or sorrow for violators. The author argues that it is necessary to apply the principle *primum remedium* like other forms of pollution violations to violators of wastewater quality standards. The position of *primum remedium* in the context of punishment is not a last resort, but is the main choice in order to provide a sense of sorrow for environmental polluters. The reason for criminal law is the main thing in law enforcement efforts because the perpetrator's actions are very detrimental to public peace and violate human rights for a good and healthy environment<sup>10</sup>.

This paper was made by comparing several journals that became the author's reference, namely, firstly, Decreasing the Parameters of Liquid Waste Pollutants in the Textile Industry by Coagulation Flocculation (Case Study: IPAL at Kampung Batik Laweyan, Surakarta, Central Java, Indonesia) by Elvis Umbu Lolo and Yonathan Suryo P., the second is the Relationship of Cognitive Ability, Cultural Values, Lifestyle, with Environmental Empathy in the Communities of the River

---

<sup>8</sup> Isnanto.

<sup>9</sup> Kania Tamara Pratiwi, Siti Kotijah, and Rini Apriyani, "Penerapan Asas Primum Remedium Tindak Pidana Lingkungan Hidup," *SASI* 27, no. 3 (October 2021): 363, <https://doi.org/10.47268/sasi.v27i3.471>.

<sup>10</sup> Pratiwi, Kotijah, and Apriyani.

Basin Waste Disposal of Batik by Peduk Rintayati, and the third is the Crime of Water Pollution Perpetrated by Business Actors in Kampong Batik Laweyan Surakarta by Mona Tiur Asihwati Tambunan and friends. These three journals broadly discuss the violation of the quality standards of liquid waste in the batik cloth industry in Laweyan, Surakarta which is not in accordance with statutory regulations and provide solutions, namely the need for supervision from the government and the community regarding waste disposal. The thing that distinguishes this research from the three studies is that the author adds a solution, namely optimizing the law through the application of the principle of *primum remedium* against violations of the quality standards of liquid waste in order to prevent and protect rivers so as to directly uphold human rights for a good and healthy environment.

Therefore, in this paper the author will discuss more deeply about the application of the *primum remedium* in cases of river pollution, especially for violations of water quality standards because until now the provisions regarding violations of waste quality standards still use the *ultimum remedium*. For this reason, the application of the *primum remedium* can be an effort in terms of protecting and maintaining water quality from pollution and its application as the enforcement of human rights.

Based on the background that has been described, the problem formulation will be formulated as follows:

1. What is the legal policy for criminal acts of river pollution, especially against violations of water quality standards in Indonesia's positive legal system?
2. Can the imposition of criminal sanctions based on *primum remedium* against perpetrators of criminal acts of polluting waste water in the environment be applied?

## 2 Method

The research method used by the author to answer the problem is a normative juridical method by examining secondary data. The secondary data will then be used to examine problems based on legal theories that are related and linked to the norms, principles, and applicable laws and regulations<sup>11</sup>. This type of research method can also be called doctrinal legal research. In conducting the research, the author uses various approaches such as the statutory approach by examining the laws and regulations as a whole regarding water environmental pollution, case approach,

---

<sup>11</sup> Soerjono Soekanto and Sri Mamudji, *Penelitian Hukum Normatif (Suatu Tinjauan Singkat)* (Jakarta: Rajawali Press, 2006).

conceptual approach, and the historical approach. The data collection technique used is search through library research by searching for legal materials through reading, viewing, listening, or searching for legal materials through internet media that are relevant to the problems faced.

In this study, the legal materials used are primary legal materials and secondary legal materials. The primary legal materials used are statutory regulations consisting of laws and various other primary legal materials. The secondary legal materials used are written publication legal materials that provide explanations of primary legal materials such as books, legal journals containing basic principles, the doctrines of experts in the field of law, and the results of legal research by scholars. Law relating to the problem under investigation. The data obtained will be presented systematically which will then be analyzed by the author in a qualitative juridical manner with descriptive and evaluative decomposition where all the data collected will then be analyzed to obtain a complete picture of a legal event related to the enforcement of human rights against environmental pollution in society. which will be discussed in the form of a narrative and conclusions will be drawn that will answer the formulation of the existing problem.

### **3 RESULT AND DISCUSSION**

#### **A. Concept of Right to a Good and Healthy Environment as Part of Constitutional Rights**

In fact, the environment and human rights have a very close relationship with each other. This correlation first emerged through the Stockholm Conference in Sweden on the Human Environment in 1972 which sparked the Stockholm Declaration. This declaration is the starting point for the international community's awareness of the importance of environmental sustainability as a fundamental part of the fulfillment of human rights which states that states have sovereign rights to utilize their natural resources in accordance with policies on safeguarding and preserving their environment. Then, at the Rio de Janeiro Meeting succeeded in formulating the normative rules for human and environmental rights regulated in the Rio Declaration and the Action Plan Agenda 21 in 1992. Then in 1994, the United Nations Special Reporter on Human Rights and the Environment for the Sub-Commission on Prevention Discrimination and Protection of Minorities issued an analysis of the relationship between human rights and the environment which in the conclusion is that environmental damage has caused serious impacts on the quality

of human rights.

In the international arena, there are several sources of law that are often used as references regarding the right to the environment. *The International Covenant on Economic, Social and Cultural Rights* (ICESCR) as one of the components of the International Human Rights Charter that has been formed and agreed upon with the *Universal Declaration of Human Rights* (UDHR) and *International Covenant on Civil and Political Rights* (ICCPR) aims to protect human rights so that humans can live as fully human beings, be free, safe, protected, and live healthy lives. Article 12 of the ICESCR explicitly states that the environment is part of the basic right of everyone to enjoy the highest attainable standard of physical and mental health. Furthermore, Article 25 of the UNDR emphasizes that everyone has the right to a healthy life so that to get a healthy life, of course, must protect the environment from damage and pollution. In line with this, in Principle 1 of the Stockholm Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration 1972) which states that “*man has the fundamental rights ... and adequate conditions of life, in an environment of a quality....*” This provision regulates the right of everyone to get healthy living conditions so that the importance of fulfilling this right is the protection of the environment <sup>12</sup>.

This right has also been guaranteed constitutional protection by Indonesia as stated in Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia. The article does not only talk about the Indonesian people having the right to physical and spiritual well-being, but also the right to a good and healthy living environment for the Indonesian people. Furthermore, Article 28 of the Decree of the Consultative Assembly of the Republic of Indonesia Number XVIII/MPR/1998 and Article 9 paragraph (3) of Law Number 39 of 1999 concerning Human Rights also emphasizes that everyone has the right to a good and healthy environment. healthy. As part of fundamental human rights, the state must respect, fulfill, and protect the right to a good and healthy environment. This is of course in line with the principles in the rule of law theory where one of them is the protection of human rights.

One of the means that can be done in order to protect these rights is through a law that can protect the environment (Environmental Protection Law) <sup>13</sup>. Where in its application, environmental protection must be oriented towards restoring human

---

<sup>12</sup> Sodikin, “Perumusan Hak Atas Lingkungan Hidup Yang Baik Dan Sehat Dalam Undang-Undang Dasar Negara Republik Indonesia Tahun 1945 Serta Upaya Perlindungan Dan Pemenuhannya,” *SUPREMASI: Jurnal Hukum* 3, no. 2 (2021): 106–25, <https://doi.org/https://doi.org/10.36441/supremasi.v3i2.207>.

<sup>13</sup> Munadjat Danusaputra, *Hukum Lingkungan*, 1st ed. (Jakarta: Binacipta, 1985).



relations with the environment <sup>14</sup>. Environmental Protection Law itself has been manifested in the form of Law Number 32 of 2009 concerning Environmental Protection and Management whose preparation is considered as a refinement and complement of Law Number 23 of 1997 concerning Environmental Management because this law was made with a philosophical study that deep and not excessive, let alone political, and become the incarnation of the constitutional guarantees provided by the 1945 Constitution of the Republic of Indonesia <sup>15</sup>. The PPLH Law provides guarantees for the fulfillment and protection of rights to the environment specifically as part of human rights as stated in Article 3 letter g and Article 65 paragraph (1) of the PPLH Law so that by protecting one's environment, one will indirectly protect and respect other people's rights. Thus, the act of destroying the environment through the act of disposing of waste that exceeds the water quality threshold into the river which results in the right to a good and healthy environment of the people living around the river being disturbed is a form of violation of human rights that have been protected by the constitution and a form of environmental crime because it can cause disaster for humans.

## **B. Impact of Environmental Damage Due to Water Pollution by Industrial Activities**

The environment is an external factor that affects an organism and these factors are divided into two, namely living organism factors and non-living factors such as energy, chemicals, and others. The term "environment" is used interchangeably with the term "environment". The two terms have literal differences, but have similarities in meaning, namely the environment in a broad sense, which includes the physical, biological, and chemical environment <sup>16</sup>. According to Munadjat Danusaputro, the environment is all matter and power and conditions, including humans with all their behavior, which are contained in the space where humans exist and have an influence on the survival and welfare of humans and other living bodies <sup>17</sup>. The environment according to KES Manik in his book as citing Article 1 point 1 of the PPLH Law states that the definition of the environment is the unity of space with all

---

<sup>14</sup> Priya Tandirerung Pasapan, "Hak Asasi Manusia Dan Perlindungan Lingkungan Hidup," *Paulus Law Journal* 1, no. 2 (March 2020): 48–58, <https://doi.org/10.51342/plj.v1i2.98>.

<sup>15</sup> Ashabul Kahpi, "Jaminan Konstitusional Terhadap Hak Atas Lingkungan Hidup Di Indonesia," *Al Daulah : Jurnal Hukum Pidana & Ketatanegaraan* 2, no. 2 (2013): 153–59, <https://doi.org/https://doi.org/10.24252/ad.v2i2.1472>.

<sup>16</sup> Muhamad Akib, *Hukum Lingkungan Perspektif Global Dan Nasional* (Jakarta: Rajawali, 2014).

<sup>17</sup> Danusaputra, *Hukum Lingkungan*.

objects, conditions, power, and living things, including humans with their behavior, which have an influence on nature itself, the survival of the environment. livelihoods, and welfare of humans and other living creatures <sup>18</sup>.

Indonesian society in general has a paradigm about the importance of the environment as just a simple object that is simply connected to nature, plants and animals. Whereas the nature of the scope of the environment is much broader than that (nature, plants, and animals). At a certain point and a certain limit, the environment cannot be separated from human daily activities, ranging from development, economy, and others. For this reason, it is necessary to give more attention to the environment when humans are carrying out development activities, the economy, and others. Because, giving more attention to the environment is the same as maintaining and respecting and fulfilling human rights <sup>19</sup>. Lack of more attention to the environment has resulted in an environmental crisis, especially river pollution. Mattias Finger said the environmental crisis occurred due to several things, namely wrong and failed policies, inefficient technology and even causing damage, low political commitment, ideas, and ideologies that damage the environment, deviant behavior from state elites, increased culture. consumerism and individualism, and individuals who are less guided (Faiz, 2016).

Water is part of the environment and is so important in supporting human life and living things. As explained above, water as part of the environment has an influence on nature itself, the continuity of life, and the welfare of humans and other living creatures. Water is used to support human activities such as being consumed, bathing, used for industrial activities such as the mineral water industry, the organic fertilizer industry, the petroleum industry, gas and others, and used by the government as a conservation area so that the environment is maintained. Water as an element of natural resources and the environment which is so important, it must be used for the greatest prosperity and welfare of the people. This means that the use of water for various benefits and interests of the general public must be carried out with a sense of wisdom by taking into account the interests of present and future generations. Water management is needed so that water supplies are safe both in quality and quantity, and of course beneficial for human life and living things to keep

---

<sup>18</sup> Karden Eddy Sontang Manik, *Pengelolaan Lingkungan Hidup* (Jakarta: Kencana, 2016).

<sup>19</sup> Pan Mohamad Faiz, "Perlindungan Terhadap Lingkungan Dalam Perspektif Konstitusi," *Jurnal Konstitusi* 13, no. 4 (2016): 766–87, <https://doi.org/10.31078/jk1344>.

functioning ecologically, in order to help sustainable development <sup>20</sup>.

In modern times like today, water is a problem that needs to get the main focus carefully and carefully. To obtain water with clean quality and according to certain quality standards, it is currently a rare item due to water pollution from various wastes, both large industries, home industries, household waste, and human activities that cause water pollution. The rapid rate of population makes the population's dependence on water increase <sup>21</sup>. There has been a decline in environmental quality such as a decrease in the quality of clean water due to the high rate of population growth and industrialization in big cities. Density of population and poor environmental sanitation conditions plus waste from industrial activities which are directly discharged into waterways and rivers without processing have become major causes of river water pollution in big cities. Wastewater in rivers in big cities is divided into three classifications, namely industrial wastewater, domestic wastewater, and wastewater from offices and shops <sup>22</sup>.

Pollution is a shift from its normal state. It can be said that river water pollution is a state of the water that has experienced a shift from its normal state. Wardhana said that the normal condition of clean water is still determined by the determining factors, namely the use of the water itself and the origin of the water source. Water pollutants can determine the parameters that occur in environmental water. Water pollutants are classified into three, namely:

1. Organic waste. In general, organic waste can be in the form of waste that can decompose or be degraded by microorganisms. This can lead to the development of microorganisms and pathogenic microbes also multiply where this can cause various kinds of diseases.

2. Inorganic waste. In general, inorganic waste material comes from waste that cannot decompose and is difficult to decompose by microorganisms. If inorganic waste materials enter the water, it will have an impact on increasing the number of metal ions. With high metal ions, the water will become hard water because it contains calcium ions (Ca) and magnesium ions (Mg). In addition to being hard, the water becomes toxic because it contains lead (Pb), arsenic (As), and mercury (Hg) which are harmful to the human body if the water is consumed.

---

<sup>20</sup> Masayu Rosyidah, "Analisis Pencemaran Air Sungai Musi Akibat Aktivitas Industri (Studi Kasus Kecamatan Kertapati Palembang)," *Jurnal Redoks* 3, no. 1 (2018): 21–32, <https://doi.org/http://dx.doi.org/10.31851/redoks.v3i1.2788>.

<sup>21</sup> Kadek Diana Harmayani and I.G.M. Konsukartha, "Pencemaran Air Tanah Akibat Pembuangan Limbah Domestik Di Lingkungan Kumuh Studi Kasus Banjar Ubung Sari, Kelurahan Ubung," *Jurnal Permukiman Natak* 5, no. 2 (2007): 62–108.

<sup>22</sup> Yudo and Said, "Masalah Pencemaran Air Di Jakarta, Sumber Dan Alternatif Penanggulangannya."

3. Chemical waste. Many kinds of chemical waste materials such as soap, pesticides, chemical dyes, tanning solutions, and radioactive substances. These waste materials if found in water will be dangerous and toxic to animals that live in water, plants that live in water, and even humans if they consume the water<sup>23</sup>

Determining whether a river is polluted or not polluted can be seen from the parameters of the chemical *oxygen demand* (COD) value, the biological *oxygen demand* (BOD) value, the phosphorus content in the river water and the acidity or pH value of the river water. If the COD and BOD values in a river exceed the standard, it can be said that the river is polluted and proves that there is a strong smell of river water and the color of the river water becomes pitch black. According to the Minister of Environment Regulation Number 5 of 2014 concerning Wastewater Quality Standards, attachment XLII states that the maximum level of BOD is 60 mg/L, while the maximum value of COD is 150 mg/L.

Indonesia is one of the countries with the largest industry. Various industries such as home industries to many industries stand up and support the country's economy. The diversity of industries that develop and operate in Indonesia has various impacts on the environment, both in the short and long term. The industrial sector can be a determinant and support for the economic growth of a country and region. The existence of industrial activities can help improve the economy of the local community. But there is one bad side, namely the impact of industrial activities, namely the waste or waste from industrial activities. But if managed then industrial waste will not be a bad thing or problem. The reality is that most industries do not manage factory effluents due to limited funds and lack of sensitivity to the environment. This will have a lasting negative impact on humans and other living things.

Coupled with the pollution or decline in the quality of river water due to an inadequate waste water disposal system and Waste Water Disposal Channels (SPAL) and Waste Water Management Installations (IPAL) that are inadequate and make the quality of river water decline. WWTP is a structure made with the aim of removing biological and chemical waste from water, thus allowing the water to be reused for other activities<sup>24</sup>. IPAL has the function of being able to manage urban wastewater such as human waste and household waste and manage liquid waste resulting from industrial activities. While SPAL is a waste water channel and treatment facility that

---

<sup>23</sup> Harmayani and Konsukartha, "Pencemaran Air Tanah Akibat Pembuangan Limbah Domestik Di Lingkungan Kumuh Studi Kasus Banjar Ubung Sari, Kelurahan Ubung."

<sup>24</sup> Ditjen Cipta Karya, "Instalasi Pengolahan Air Limbah (IPAL) Tahun 2021," 2021.

collects, distributes, and treats human waste and wastewater. The most common form of SPAL in big cities is in the form of a ditch or pipe. In general, SPAL is used for densely populated areas, business and industrial areas that generate wastewater, and housing and other areas (government and private) <sup>25</sup>.

The Ministry of Environment and Forestry of the Republic of Indonesia noted that in 2020 heavily polluted rivers account for 59% of the total rivers in Indonesia. Meanwhile, 26.6% moderately polluted rivers and 8.9% lightly polluted rivers <sup>26</sup>. The contamination of the river is due to liquid waste from industrial activities that is discharged directly into the river. The Central Statistics Agency recorded that in 2021 in Indonesia as many as 66,636 villages have rivers and as many as 6,027 villages whose rivers have been polluted due to industrial waste <sup>27</sup>. Examples of evidence of river contamination are the contamination of the Bengawan Solo River in Central Java and the Citarum River in West Java. Both rivers are the largest rivers in Indonesia. There are 1,629 factories around the Citarum River, 185 of which do not have WWTP facilities and 1,286 factories are not recorded as having WWTP facilities <sup>28</sup>. Likewise, in the Bengawan Solo River, there are not many WWTP facilities around the river and some of them are not functioning optimally <sup>29</sup>. Whereas the function of the IPAL is to manage waste so that when it is discharged into the river it is in accordance with disposal standards so that it does not cause environmental pollution <sup>30</sup>. With the WWTP, the sustainability of the river will be protected, its functions and benefits will be improved, and the negative impact on the environment will be controlled.

Water pollution is one of the threats that many people worry about because water is the source of life. The existence of pollution in the watershed (DAS) due to the impact of industrial developments that can affect the environmental carrying capacity of living things around the river. Water that has been polluted, both by organic and inorganic compounds, can easily become a place for the development of various diseases. Pollution and contamination of river water is not only detrimental or has an impact on the people living on the banks of the river, but is like river water

---

<sup>25</sup> Delli Noviarti Rachman, "Analisa Infrastruktur Saluran Pembuangan Air Limbah Eksisting Di Kelurahan 2 Ilir Kecamatan Ilir Timur II Kota Palembang," *Jurnal Teknik Sipil* 9, no. 1 (January 2020): 16–24, <https://doi.org/10.36546/tekniksipil.v9i1.265>.

<sup>26</sup> Antara, "KLHK Ungkap Penyebab 59 Persen Sungai Di Indonesia Tercemar Berat," *Tempo*, 2021.

<sup>27</sup> Vika Azkiya Dihni, "Banyak Desa Yang Sungaiinya Tercemar, Dari Mana Sumber Limbahnya?," *Katadata*, 2022.

<sup>28</sup> CNN Indonesia, "1.286 Industri Di Citarum Tak Terdata Punya Pengolahan Limbah," *CNN Indonesia*, April 2019.

<sup>29</sup> R. Boni Eko Wicaksono, "Pakar Lingkungan UNS : Pencemaran Bengawan Solo Hanya Bisa Ditangani Provinsi," *Solopos.com*, September 2021.

<sup>30</sup> Mahfudloh and Hesti Lestari, "Strategi Penanganan Limbah Industri Batik Di Kota Pekalongan," *Jurnal of Public Policy and Management Review* 6, no. 3 (2017): 54–69, <https://doi.org/http://10.14710/jppmr.v6i3.16598>.

that flows from upstream to downstream, which means that it has an impact on the wider community.

The occurrence of river pollution is due to the influence of wastewater quality that exceeds the quality standard of waste water, besides that it is also determined by the discharge of the generated wastewater. Azwir said that the indicators of river pollution are not only physically and chemically determined but also biologically. Pollutants in water include chemical elements, pathogens or bacteria, and changes in the physical and chemical properties of water. Many chemical elements are toxic substances that pollute water. Water pollution from the bacterial aspect is by causing disease in humans and animals due to the consumption of the water. The physical and chemical properties of water include the degree of acidity, temperature and surface fertilization of the water, and electrical conductivity<sup>31</sup>.

The increasingly massive development and industrial activities have resulted in an impact of pollution or environmental destruction, especially rivers, so that ecosystem functions are disrupted and not in accordance with their intended functions. This affects the existence of water resources whose quality is decreasing due to development and industrial activities by disposing of the remaining waste from these activities into rivers or water sources. Pollution of the environment, especially rivers, will have an impact in the form of damage or disruption of the surrounding environment such as the biotic environment, abiotic environment, and social environment. Many organisms, biota, animals, and plants will be damaged and even cause death because of the pollution. Not only animals and plants and other organisms, humans are also affected by those who live around rivers or who consume polluted water. They will easily get disease due to the substances that pollute the river<sup>32</sup>. From an aesthetic point of view, river pollution has an impact, namely the presence of a pungent smell from the river<sup>33</sup>.

In addition, river pollution reduces the usability of water. Water as an element of the environment can affect and be influenced by other elements. Polluted water and reducing water quality will result in poor environmental conditions so that it will have a negative impact on the health and safety of humans and other living creatures. The decline in water quality can reduce the wealth of natural resources by decreasing the

---

<sup>31</sup> Meilani Belladona, "Analisis Tingkat Pencemaran Sungai Akibat Limbah Industri Karet Di Kabupaten Bengkulu Tengah," in *Prosiding Semnastek*, 2017.

<sup>32</sup> Puspitasari, "Dampak Pencemaran Air Terhadap Kesehatan Lingkungan Dalam Perspektif Hukum Lingkungan (Studi Kasus Sungai Code Di Kelurahan Wirogunan Kecamatan Mergangsan Dan Kelurahan Prawirodirjan Kecamatan Gondomanan Yogyakarta)."

<sup>33</sup> Yulia Khairina Ashar, Susilawati, and Dewi Agustina, "Analisis Kualitas (BOD, COD, DO) Air Sungai Pesanggrahan Desa Rawadenok Kelurahan Rangkaepan Jaya Baru Kecamatan Mas Kota Depok" (Medan, 2020).

usability, usability, productivity, carrying capacity, and capacity of water resources. As previously mentioned, in 2021 it was recorded that 66,636 villages in Indonesia had rivers polluted with sewage and there were 10,683 villages experiencing water pollution with Central Java Province being the highest in Indonesia with 1,310 villages experiencing water pollution<sup>34</sup>. With many places inhabited by the community, the water is polluted, it has an impact on losses from the perspective of costs, economy, and health. The World Bank analyzes that water is an important commodity for productivity, which can hamper economic growth, reduce health conditions, reduce food production, and increase the number of poor people in the world<sup>35</sup>.

The documentary report on the clean water crisis entitled "*Water Unknown: The Invisible Water Crisis*" said that gross domestic product growth fell by 0.82 basis points in highly polluted downstream areas, compared to an average economic growth rate of 2.33%. The Asian Development Bank said that as a result of water pollution, Indonesia suffered a cost loss of 45 trillion rupiah. The cost losses consist of the cost of providing clean water, health costs, loss of productive time, bad image of tourism, and high cases of infant mortality. Regarding the impact of water pollution on public health and safety, diseases caused by water pollution are typhus, cholera, hepatitis, and various other diseases. Data from the Global Alliance on Health and Pollution in December 2019, the number of deaths due to water pollution in Indonesia was 60,040 deaths, the second highest after air pollution<sup>36</sup>.

From the description above that the occurrence of water pollution is so dangerous for the survival of human life and the survival of the surrounding environment. In this journal the author will provide examples of cases of water pollution that occur as a result of industrial activity waste that is dumped directly in the river without being processed first. This case occurred in the city of Surakarta or Solo, where the city has many industries, especially in Kampung Laweyan Solo. Because of the large number of batik industries in Laweyan, Solo, in 2004 the Laweyan area was designated as "Batik Village" and the trend of batik was rising. Kampung Batik Laweyan Solo is a village with an area of 24.83 hectares with a population of about 2,500 people<sup>37</sup>.

---

<sup>34</sup> Dihni, "Banyak Desa Yang Sungainya Tercemar, Dari Mana Sumber Limbahnya?"

<sup>35</sup> Achmad Aris, "Waduh! Pencemaran Air Ternyata Bisa Hambat Pertumbuhan Ekonomi Global," *Bisnis.Com*, 2019.

<sup>36</sup> Andrea Lidwina, "Jenis Polusi Penyebab Kematian Di Indonesia," *Katadata*, 2019.

<sup>37</sup> Peduk Rintayati, "Hubungan Kemampuan Kognitif, Nilai Budaya, Gaya Hidup Dengan Empati Lingkungan Pada Masyarakatwilayah Sungai Pembuangan Limbah Batik Survei Pada Masyarakat Kota Batik Surakarta," *Jurnal Ilmiah Pendidikan Lingkungan Dan Pembangunan* 12, no. 1 (May 2017): 45–61, <https://doi.org/10.21009/PLPB.121.03>.

The number of batik industries in Kampung Batik Laweyan is approximately 102 batik industries, consisting of 59 small industries, 37 medium industries, and 6 large industries. Every day, Kampung Batik produces batik cloth, which is 400 meters/day/craftsmen. However, from the batik production, liquid batik waste is generated with a volume of 100 m<sup>3</sup> and flows directly into the Premulung River without being processed first<sup>38</sup>. The Premulung River is a tributary of the Bengawan Solo River which flows in the city of Surakarta, which originates in Boyolali Regency. The river has been designated by the 2018 Surakarta Regional Environmental Management Summary Report as a polluted river. Not only the Premulung River, the Jenes River which is also a tributary of the Bengawan Solo River is also affected by pollution due to the batik industry liquid waste<sup>39</sup>.

One of the liquid wastes produced by the batik industry is the color of batik in wastewater. When the process of dyeing batik cloth, not all colors are absorbed into the cloth and result in residual dyes. With a lot of liquid waste from the batik industry being dumped into the Bengawan Solo River, the Bengawan Solo River water exceeds the wastewater quality standard with a fairly high COD value of 1600 mg/L and a BOD value of 660.28 mg/L. Whereas according to Central Java Regional Regulation Number 5 of 2012 concerning Wastewater Standards, the limit for river BOD and COD values is for BOD of 60 mg/L and for COD of 150 mg/L<sup>40</sup>.

The occurrence of water pollution in the Bengawan Solo River certainly has a direct impact on the population around the Bengawan Solo River, which amounts to 15.2 million people. This pollution causes damage to river water quality standards which can affect the life of river ecosystems and human life<sup>41</sup>. The water condition of the Bengawan Solo River is very dirty and cloudy and emits an unpleasant smell from the river. If the dry season conditions or do not experience rain and river water discharge in normal quantities, the stench will spread in a relatively far radius<sup>42</sup>.

The material that pollutes the Bengawan Solo River is Naptol, a chemical dye commonly used in the batik industry. Naptol is a chemical that is included in the

---

<sup>38</sup> Rintayati.

<sup>39</sup> M. W. Tamami, "Penegakan Hukum Terhadap Pencemaran Limbah Cair Di Kota Surakarta," *Dinamika Hukum* 11, no. 2 (2020).

<sup>40</sup> Elvis Umbu Lolo and Yonathan Suryo Pambudi, "Penurunan Parameter Pencemar Limbah Cair Industri Tekstil Secara Koagulasi Flokulasi (Studi Kasus: IPAL Kampung Batik Laweyan, Surakarta, Jawa Tengah, Indonesia)," *Jurnal Serambi Engineering* 5, no. 3 (July 2020): 1090–98, <https://doi.org/10.32672/jse.v5i3.2072>.

<sup>41</sup> Agus Djoko Utomo et al., "Pencemaran Di Sungai Bengawan Solo Antara Solo Dan Sragen, Jawa Tengah," *Jurnal BAWAL Widya Riset Perikanan Tangkap* 3, no. 1 (2010): 25–32, <https://doi.org/http://dx.doi.org/10.15578/bawal.3.1.2010.25-32>.

<sup>42</sup> Endi Ramadhani, Alif Noor Anna, and Munawar Cholil, "Analisis Pencemaran Kualitas Air Sungai Bengawan Solo Akibat Limbah Industri Di Kecamatan Kebakkramat Kabupaten Karanganyar" (Universitas Muhammadiyah Surakarta, 2016).



category of Toxic and Hazardous Materials and can cause skin cancer. Besides Naptol, other chemicals that are the result of batik industry waste are sodium, cadmium, and chrome. Both cadmium and chromium, these two materials are very much contained in the water of the Bengawan Solo River and exceed the threshold <sup>43</sup>.

In addition to the pungent smell, the contamination of the Bengawan Solo River damages the river ecosystem with many fish dying and the loss of the benefits of water for the community. The types of fish that died were tilapia and bader fish. As a result, dozens of fishing boats only docked at the Bengawan Solo River pier and hundreds of fishermen were forced to be unable to find fish. Moreover, local fishermen do not dare to look for fish for fear that the fish can poison if consumed. The Head of the Technical Section for the Regional Drinking Water Company Blora, Suyitno, said that 12 thousand customers did not get a clean water supply <sup>44</sup>. Even the polluted water of the Bengawan Solo River has been absorbed into the residents' wells. Even though the water from this well is one of the supporting daily needs of the residents around Kampung Batik.

From the description above, efforts are needed to prevent and overcome river water, especially the Bengawan Solo River from industrial liquid waste pollution. The author argues that the effort that must be made is to optimize the application of the *primum remedium* in cases of violation of the waste water quality standard limits as an enforcement of human rights, especially the right to clean water and the right to a clean and healthy environment.

### **C. Impact of Environmental Damage Due to Water Pollution by Industrial Activities**

Law aims to create order and balance in the society. Every relationship in society must not conflict with the norms in the provisions of positive law that exist and apply in people's lives. Law does not only create positive legal regulations, but also functions to balance the rights and obligations of humans as social beings and manifests justice in living together. This was confirmed by Jeremy Bentham as quoted by Achmad Ali who stated that the law is only recognized as law, if it provides the greatest benefit to as many people as possible <sup>45</sup>. From this we can conclude that the law is obliged to

---

<sup>43</sup> Rintayati, "Hubungan Kemampuan Kognitif, Nilai Budaya, Gaya Hidup Dengan Empati Lingkungan Pada Masyarakatwilayah Sungai Pembuangan Limbah Batik Survei Pada Masyarakat Kota Batik Surakarta."

<sup>44</sup> Akhmad Safuan, "Pencemaran Parah Sungai Bengawan Solo Kian Parah," *Media Indonesia*, 2019.

<sup>45</sup> Achmad Ali, *Menguak Teori Hukum Legal Theory Dan Teori Peradilan Judicialprudance* (Makassar: Kencana, 2007).

provide benefits to the community regardless of anyone's social status. Because of the importance of the legal position and position in the order of people's lives, the formation of legal regulations cannot be separated from the use of legal principles because they are the main basis in the formation and interpretation of the law itself.

In the formation of a good community life, it is necessary to consider the principles or principles in the formation of a legal regulation so that it is in line with the social ideals of the nation and the needs of people's lives. This is because the legal principle is the broadest basis for the birth of a legal regulation. Legal principles are basic rules and legal principles that are abstract and generally underlie concrete regulations and law enforcement. In line with this, Satjipto Rahardjo expressed his view which said that legal principles are the 'heart' of legal regulations so that to understand a legal regulation it is necessary to have a legal principle used<sup>46</sup>. Therefore, Indonesia's positive law must not conflict with legal principles because it has become the basis for finding legal truth and as a pile of legal thinking in order to protect the community well.

In the context of environmental law, we can see whether the legal principles used have been implemented properly reflected through law enforcement itself. Enforcement of environmental law is not only intended to punish environmental polluters, but is also intended to prevent acts or actions that can cause environmental damage and or pollution. Enforcement of environmental law is repressive and preventive. Repressive environmental law enforcement is aimed at tackling environmental damage and/or pollution. We can see this from the creation of related legal instruments that regulate the imposition of sanctions (punishments) on environmental destroyers or polluters in the form of criminal sanctions (imprisonment and fines), civil sanctions (compensation and/or certain actions), and administrative sanctions (coercion by the government, forced money, and license revocation).

The criminal law system in Indonesia recognizes the principles of *ultimum remedium* and *primum remedium* related to the provision of criminal sanctions. Principle *ultimum remedium* is a principle in criminal law that makes criminal sanctions an alternative or last resort in law enforcement, including law enforcement in the environmental field, while the *primum remedium* is the opposite of the *ultimum remedium* where criminal law enforcement is through criminal sanctions in the form of imposing suffering on a person or corporation is preferred. If we talk about the enforcement of the criminal act of polluting the water environment, in fact in its

---

<sup>46</sup> Satjipto Rahardjo, *Ilmu Hukum* (Bandung: Citra Aditya Bakti, 2012).

application it uses two types of principles in giving sanctions to perpetrators of water pollution. This is reflected in the PPLH Law which regulates the *ultimum remedium* in the General Elucidation number 6 of the PPLH Law and the *primum remedium* in Articles 97 to 120 of the PPLH Law.

However, in its development, the application of the *ultimum remedium* encountered obstacles because if an act was deemed to be truly detrimental to the interests of the state and the people, both according to applicable laws and according to the feelings of the community, then criminal sanctions would be the main choice (*primum remedium*). Principle *primum remedium* in the context of environmental law is no longer a last resort but as a first effort to deter people from committing criminal environmental pollution violations. The explanation of Article 6 of the PPLH Law clearly states that the enforcement of environmental criminal law still pays attention to the *ultimum remedium* which requires the application of criminal law enforcement as a last resort. However, in practice there are some exceptions to the *ultimum remedium*. One of them is the offense of water pollution, especially the violation of pollution that exceeds the water quality standard, can use the *primum remedium* as regulated in Article 100 of the PPLH Law.

Pollution violations that exceed water quality standards are often found in rivers in Indonesia as described previously. One example of the crime of pollution is the finding that pollution occurred in the Laweyan River which is a tributary of the Bengawan Solo River by the batik industry businessmen of Kampung Laweyan. This has been happening for years and even in 2014 the NGO Paguyuban Ngrekso Lepen Mangku Keprabon submitted a letter of complaint to the Mayor of Solo regarding the environmental pollution. However, the pollution still occurs as evidenced by the results of research conducted by Elvis Umbu Lolo and Yonathan Suryo Pambudi in 2019. They stated that the home batik industry of Kampung Laweyan did not take any efforts to prevent environmental pollution from the wastewater it produced <sup>47</sup>.

With no effort to prevent environmental pollution from batik industry players, it is clear that law enforcement through administrative sanctions with the application of the *ultimum remedium* is not optimal and does not cause a deterrent effect for violators of water pollution. Therefore, in the opinion of the author, if the violation is committed more than once, it is necessary to optimize law enforcement through the *primum remedium* principle by overriding the *ultimum remedium* in imposing criminal sanctions in order to resolve the problem of environmental pollution as regulated in

---

<sup>47</sup> Lolo and Pambudi, "Penurunan Parameter Pencemar Limbah Cair Industri Tekstil Secara Koagulasi Flokulasi (Studi Kasus: IPAL Kampung Batik Laweyan, Surakarta, Jawa Tengah, Indonesia)."

Article 100 paragraph (2) of the PPLH Law. This is because *ultimum remedium* has given rise to several weaknesses such as giving rise to many interpretations and limiting law enforcement's space for violators of wastewater quality standards<sup>48</sup>. In addition, Hamdan as quoted by Rahmida Erliyani stated several reasons related to the weakness of the use of the *ultimum remedium* in environmental pollution, among others<sup>49</sup>:

1. Generally, the case process takes a relatively long time because it is likely that the perpetrator will extend the court time. or the execution time by filing an appeal while the pollution continues with all its consequences.
2. Recovery period is difficult to do in a short time;
3. Without applying criminal sanctions so that pollution can occur again (not causing a deterrent effect);
4. The application of administrative sanctions can result in the closure of industrial companies which also affects workers, the number of unemployed will be even greater, can lead to crime and other socio-economic disparities.

Optimizing the use of the *primum remedium* in Article 100 of the PPLH Law regarding violations of wastewater quality standards is very necessary because it involves the right to a healthy and good environment for the community. The problem of river pollution by violating the quality standards of waste water is one of the problems of human rights because it violates the right of everyone to get the environment with all its ecosystems. As previously explained, the damage and contamination of the Bengawan Solo River has resulted in the community along the Bengawan Solo River totaling 15.2 million people experiencing health problems, polluting the surrounding environment with a foul odor arising from the river, and loss of rights to clean water. Moreover, the impact of pollution is also felt for other living things with the destruction of river ecosystems to the death of fish in the river. From this description, it is clear that the activities of the batik industry that damage rivers have violated the human rights of a good and healthy environment because the waste is disposed of directly without being processed. As an act that is classified as an environmental crime, it is appropriate that the perpetrators of polluting the water environment, especially on rivers, either to individuals or corporations that have disturbed the community and are proven to have violated can be subject to criminal sanctions through the application of the *primum remedium* so that it can cause a sad

---

<sup>48</sup> Edy Lisdiyono and Rumbadi, "PENERAPAN ASAS PRIMUM REMEDIUM DALAM PERKARA PENCEMARAN LINGKUNGAN HIDUP AKIBAT LIMBAH B3," *Bina Hukum Lingkungan* 3, no. 1 (October 2018): 1–12, <https://doi.org/10.24970/jbhl.v3n1.1>.

<sup>49</sup> Rahmida Erliyani, "The Essence of Primum Remedium Principle in The Enforcement of Environmental Criminal Law," *Journal of Law, Policy, and Globalization* 64 (2017).

effect and a deterrent effect for the perpetrators. and upholding the supremacy of the right to a good and healthy environment belonging to the community <sup>50</sup>.

## 4 CONCLUSION

As part of the environment and important in supporting human life and living creatures, water quality and quantity should be maintained and used for the greatest prosperity of the people through the application of the principle of *primum remedium* on violations of the quality standards of liquid waste. Although the right to a good and healthy environment has been protected in the Constitution and several other regulations, its implementation has not been optimal. We can see this from the number of batik industry entrepreneurs who pollute the Laweyan River which has an impact on the Begawan Solo River. The ineffectiveness of the administrative sanctions given makes the less deterrent effect felt by the perpetrators of pollution. The state can enforce environmental protection through optimization from the *ultimum remedium* principle to the *primum remedium* for violations of the quality standards of liquid waste that pollute the water environment. The application of the principle of *primum remedium* in violation of the quality standards of liquid waste is a form of upholding human rights for a good and healthy environment because it prioritizes law enforcement through criminal law. In addition, *primum remedium* can also provide new directions in preventing and protecting the environment, especially rivers that contain water by providing criminal sanctions to violators so that they can provide a deterrent effect and not repeat their actions again.

## 5 ACKNOWLEDGMENTS

None

## 6 DECLARATION OF CONFLICTING INTERESTS

Authors declare that there is no conflicting interest in this research and publication.

## 7 FUNDING

None

---

<sup>50</sup> M. Holyone Nurdin Singadimedja, "Penerapan Hukum Pidana Lingkungan Bagi Pelaku Pencemaran Citarum Di Karawang," *Jurnal Ilmiah Hukum DE'JURE: Kajian Ilmiah Hukum* 1, no. 2 (2016): 301–328, <https://doi.org/https://doi.org/10.35706/dejure.v1i2.511>.

## 8 REFERENCES

- Akib, Muhamad. *Hukum Lingkungan Perspektif Global Dan Nasional*. Jakarta: Rajawali, 2014.
- Ali, Achmad. *Menguak Teori Hukum Legal Theory Dan Teori Peradilan Judicialprudence*. Makassar: Kencana, 2007.
- Antara. "KLHK Ungkap Penyebab 59 Persen Sungai Di Indonesia Tercemar Berat." *Tempo*, 2021.
- Aris, Achmad. "Waduh! Pencemaran Air Ternyata Bisa Hambat Pertumbuhan Ekonomi Global." *Bisnis.Com*. 2019.
- Ashar, Yulia Khairina, Susilawati, and Dewi Agustina. "Analisis Kualitas (BOD, COD, DO) Air Sungai Pesanggrahan Desa Rawadenok Kelurahan Rangkepan Jaya Baru Kecamatan Mas Kota Depok." Medan, 2020.
- Belladona, Meilani. "Analisis Tingkat Pencemaran Sungai Akibat Limbah Industri Karet Di Kabupaten Bengkulu Tengah." In *Prosiding Semnastek*, 2017.
- CNN Indonesia. "1.286 Industri Di Citarum Tak Terdata Punya Pengolahan Limbah." *CNN Indonesia*, April 2019.
- Danusaputra, Munadjat. *Hukum Lingkungan*. 1st ed. Jakarta: Binacipta, 1985.
- Dawud, Muhammad, Idi Namara, Nurul Chayati, and Fadhillah Muhammad LT. "Analisis Sistem Pengendalian Pencemaran Air Sungai Cisadane Kota Tangerang Berbasis Masyarakat." In *Prosiding Semnastek*. Fakultas Teknik Universitas Muhammadiyah Jakarta, 2016.
- Dihni, Vika Azkiya. "Banyak Desa Yang Sungaiinya Tercemar, Dari Mana Sumber Limbahnya?" *Katadata*, 2022.
- Ditjen Cipta Karya. "Instalasi Pengolahan Air Limbah (IPAL) Tahun 2021," 2021.
- Erliyani, Rahmida. "The Essence of Primum Remedium Principle in The Enforcement of Environmental Criminal Law." *Journal of Law, Policy, and Globalization* 64 (2017).
- Faiz, Pan Mohamad. "Perlindungan Terhadap Lingkungan Dalam Perspektif Konstitusi." *Jurnal Konstitusi* 13, no. 4 (2016): 766–87. <https://doi.org/10.31078/jk1344>.
- Harmayani, Kadek Diana, and I.G.M. Konsukartha. "Pencemaran Air Tanah Akibat Pembuangan Limbah Domestik Di Lingkungan Kumuh Studi Kasus Banjar Ubung Sari, Kelurahan Ubung." *Jurnal Permukiman Natak* 5, no. 2 (2007): 62–108.
- Isnanto, Bayu Ardi. "DLHK Jateng: 63 Industri Cemari Bengawan Solo, 4

- Terancam Pidana." detiknews, 2021.
- Kahpi, Ashabul. "Jaminan Konstitusional Terhadap Hak Atas Lingkungan Hidup Di Indonesia." *Al Daulah : Jurnal Hukum Pidana & Ketatanegaraan* 2, no. 2 (2013): 153–59. <https://doi.org/https://doi.org/10.24252/ad.v2i2.1472>.
- Lidwina, Andrea. "Jenis Polusi Penyebab Kematian Di Indonesia." Katadata, 2019.
- Lisdiyono, Edy, and Rumbadi. "PENERAPAN ASAS PREMIUM REMEDIUM DALAM PERKARA PENCEMARAN LINGKUNGAN HIDUP AKIBAT LIMBAH B3." *Bina Hukum Lingkungan* 3, no. 1 (October 2018): 1–12. <https://doi.org/10.24970/jbhl.v3n1.1>.
- Lolo, Elvis Umbu, and Yonathan Suryo Pambudi. "Penurunan Parameter Pencemar Limbah Cair Industri Tekstil Secara Koagulasi Flokulasi (Studi Kasus: IPAL Kampung Batik Laweyan, Surakarta, Jawa Tengah, Indonesia)." *Jurnal Serambi Engineering* 5, no. 3 (July 2020): 1090–98. <https://doi.org/10.32672/jse.v5i3.2072>.
- Mahfudloh, and Hesti Lestari. "Strategi Penanganan Limbah Industri Batik Di Kota Pekalongan." *Journal of Public Policy and Management Review* 6, no. 3 (2017): 54–69. <https://doi.org/http://10.14710/jppmr.v6i3.16598>.
- Manik, Karden Eddy Sontang. *Pengelolaan Lingkungan Hidup*. Jakarta: Kencana, 2016.
- Pasapan, Priya Tandirerung. "Hak Asasi Manusia Dan Perlindungan Lingkungan Hidup." *Paulus Law Journal* 1, no. 2 (March 2020): 48–58. <https://doi.org/10.51342/plj.v1i2.98>.
- Pratiwi, Kania Tamara, Siti Kotijah, and Rini Apriyani. "Penerapan Asas Primum Remedium Tindak Pidana Lingkungan Hidup." *SASI* 27, no. 3 (October 2021): 363. <https://doi.org/10.47268/sasi.v27i3.471>.
- Pratiwi, Sri Septi Dyah. "Analisis Dampak Sumber Air Sungai Akibat Pencemaran Pabrik Gula Dan Pabrik Pembuatan Sosis." *Journal of Research and Education Chemistry* 3, no. 2 (2021): 122–42. [https://doi.org/https://doi.org/10.25299/jrec.2021.vol3\(2\).7774](https://doi.org/https://doi.org/10.25299/jrec.2021.vol3(2).7774).
- Puspitasari, Dinarjati Eka. "Dampak Pencemaran Air Terhadap Kesehatan Lingkungan Dalam Perspektif Hukum Lingkungan (Studi Kasus Sungai Code Di Kelurahan Wirogunan Kecamatan Mergangsan Dan Kelurahan Prawirodirjan Kecamatan Gondomanan Yogyakarta)." *Jurnal Mimbar Hukum* 21, no. 1 (2009): 23–34. <https://doi.org/https://doi.org/10.22146/jmh.16254>.

- Rachman, Delli Novianti. "Analisa Infrastruktur Saluran Pembuangan Air Limbah Eksisting Di Kelurahan 2 Ilir Kecamatan Ilir Timur II Kota Palembang." *Jurnal Teknik Sipil* 9, no. 1 (January 2020): 16–24. <https://doi.org/10.36546/tekniksipil.v9i1.265>.
- Rahardjo, Satjipto. *Ilmu Hukum*. Bandung: Citra Aditya Bakti, 2012.
- Ramadhani, Endi, Alif Noor Anna, and Munawar Cholil. "Analisis Pencemaran Kualitas Air Sungai Bengawan Solo Akibat Limbah Industri Di Kecamatan Kebakkramat Kabupaten Karanganyar`." Universitas Muhammadiyah Surakarta, 2016.
- Rintayati, Peduk. "Hubungan Kemampuan Kognitif, Nilai Budaya, Gaya Hidup Dengan Empati Lingkungan Pada Masyarakatwilayah Sungai Pembuangan Limbah Batik Survei Pada Masyarakat Kota Batik Surakarta." *Jurnal Ilmiah Pendidikan Lingkungan Dan Pembangunan* 12, no. 1 (May 2017): 45–61. <https://doi.org/10.21009/PLPB.121.03>.
- Rochmani, Rochmani. "Perlindungan Hak Atas Lingkungan Hidup Yang Baik Dan Sehat Di Era Globalisasi." *Masalah-Masalah Hukum* 44, no. 1 (January 2015): 18. <https://doi.org/10.14710/mmh.44.1.2015.18-25>.
- Rosyidah, Masayu. "Analisis Pencemaran Air Sungai Musi Akibat Aktivitas Industri (Studi Kasus Kecamatan Kertapati Palembang)." *Jurnal Redoks* 3, no. 1 (2018): 21–32. <https://doi.org/http://dx.doi.org/10.31851/redoks.v3i1.2788>.
- Safuan, Akhmad. "Pencemaran Parah Sungai Bengawan Solo Kian Parah." *Media Indonesia*, 2019.
- Singadimedja, M. Holyone Nurdin. "Penerapan Hukum Pidana Lingkungan Bagi Pelaku Pencemaran Citarum Di Karawang." *Jurnal Ilmiah Hukum DE'JURE: Kajian Ilmiah Hukum* 1, no. 2 (2016): 301–328. <https://doi.org/https://doi.org/10.35706/dejure.v1i2.511>.
- Sodikin. "Perumusan Hak Atas Lingkungan Hidup Yang Baik Dan Sehat Dalam Undang-Undang Dasar Negara Republik Indonesia Tahun 1945 Serta Upaya Perlindungan Dan Pemenuhannya." *SUPREMASI: Jurnal Hukum* 3, no. 2 (2021): 106–25. <https://doi.org/https://doi.org/10.36441/supremasi.v3i2.207>.
- Soekanto, Soerjono, and Sri Mamudji. *Penelitian Hukum Normatif (Suatu Tinjauan Singkat)*. Jakarta: Rajawali Press, 2006.
- Sunaryo, Arie. "Limbah Batik Dominasi Pencemaran Sungai Di Solo." *Merdeka.com*, 2017.



- Tamami, M. W. "Penegakan Hukum Terhadap Pencemaran Limbah Cair Di Kota Surakarta." *Dinamika Hukum* 11, no. 2 (2020).
- Utomo, Agus Djoko, Moh. Rasyid Ridho, Edward Saleh, and Dinar Dwi Anugerah Putranto. "Pencemaran Di Sungai Bengawan Solo Antara Solo Dan Sragen, Jawa Tengah." *Jurnal BAWAL Widya Riset Perikanan Tangkap* 3, no. 1 (2010): 25–32. <https://doi.org/http://dx.doi.org/10.15578/bawal.3.1.2010.25-32>.
- Wicaksono, R. Boni Eko. "Pakar Lingkungan UNS : Pencemaran Bengawan Solo Hanya Bisa Ditangani Provinsi." *Solopos.com*, September 2021.
- Yudo, Satmoko, and Nusa Idaman Said. "Masalah Pencemaran Air Di Jakarta, Sumber Dan Alternatif Penanggulangannya." *Jurnal Teknologi Lingkungan* 2, no. 2 (2001): 199–206. <https://doi.org/https://doi.org/10.29122/jtl.v2i2.214>.

*It is not wisdom but authority  
that makes a law*

**Thomas Hobbes**