



Comprehensive and Measurable Environmental Monitoring: A Comparison of Indonesian and Danish Concepts

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Keywords

Environmental Protection and Management; Legal Reform; Monitoring.

DOI

<https://doi.org/10.24843/UJLC.2024.v08.i01.p05>

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Abstract

Supervision is one of Indonesia's efforts to protect the environment, but its regulation still needs improvement. The reason is that the regulation does not cover broad authority for the Technical Authority, a comprehensive and measurable supervision scheme. Regulations regarding this matter significantly affect entrepreneurs' compliance levels to prevent or even increase environmental violations. Therefore, the regulation can be improved by studying it from Denmark. This study aims to provide an overview of environmental monitoring in Denmark to be used as a reference for regulatory changes in Indonesia. More comprehensive and participatory supervision regulations can significantly reduce environmental pollution and/or damage cases. This research is normative research with statutory and comparative approaches. The study suggests that several provisions in Denmark can be adopted, namely the extent of the authority of Danish Supervisory Officials starting from location, raw materials, and equipment used to product distribution and intervention against companies, stricter sanctions, and ensnare environmental violators, the authority to obtain personal information from other institutions, an excellent vertical integration system, and Supervisory Officials according to the number and background.

1. INTRODUCTION

Principle 1 of the Stockholm Declaration and Aarhus Convention 1998 states that everyone has the right to live in a good environment for their health and well-being.¹ Humans also have an obligation to protect and improve their environment for current and future generations, both individually and collectively.² Denmark as a state party to the Aarhus

¹ See UNEP, "Stockholm Declaration," (1972), Art. 1; and Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention 1998), Preamble and Art. 1.

² Sapto Hermawan and Winarno Budyatmodjo, "Implementasi Demokrasi Lingkungan Hidup Sebagai Upaya Mengurangi Timbulan Sampah Plastik di Lautan Indonesia," *Undang: Jurnal Hukum* 5, no. 1 (2022): 192.

Convention has a legal obligation to adopt the right into national legislation.³

The United Nations (UN) in UN General Assembly No. A/76/L.75 in 2022 also declared such a right. Indonesia, as one of the UN member states, must support the fulfillment of these rights including UN General Assembly Resolution No. A/RES/76/300, in year 2022, which recognizes the right to a clean and healthy environment as a human right.⁴

In fact, the right to the environment is a right that cannot be reduced under any circumstances.⁵ However, Indonesia has not committed seriously to fulfil the the right to a clean and healthy environment as a human right as stipulated in the UN General Assembly No. A/76/L.75 (2022).⁶ It is shown on the Ministry of Environment and Forestry Law Enforcement's data, that the number of company Supervisions from 2015 to 2023 has fluctuated.⁷

Table 1. Company Supervision Data Table 2015 – 2023

Year	Natural Resources	Industry, Infrastructure & Services	Forestry	Total
2017	61	165	13	239
2018	68	284	42	394
2019	180	285	58	523
2020	50	143	43	236
2021	65	182	5	252
2022	224	209	10	443

Source: Ministry of Environment and Forestry of the Republic of Indonesia

Table 1 describes that the number of supervisions from 2017 to 2022 is 2087. The data is presented for the last 6 years so that it can be seen the effect of the difference before and after the enactment of the Job Creation Law at the end of 2020 and the changes thereafter. It can be seen that the

³ Magdalena Michalak and Przemysław Kledzik, "The Aarhus Convention and Polish Regulations Concerning Parties to Proceedings for Issuing the Eia Decisions," *Journal for European Environmental & Planning Law* 18, no. 1-2 (2021): 56.

⁴ Andang Binawan and Maria Grasia Sari Soetopo, "Implementasi Hak Atas Lingkungan Hidup Yang Bersih, Sehat, dan Berkelanjutan Dalam Konteks Hukum Indonesia," *Jurnal Hukum Lingkungan Indonesia* 9, no. 1 (2022): 124.

⁵ Toar Neman Palilingan, Donna Okthalia Setiabudhi, and Toar K.R. Palilingan, "Environmental Policy, Public Health and Human Rights: Assessing the Regional Regulation on Waste," *Hasanuddin Law Review* 4, no. 3 (2018): 340.

⁶ Sayyidatihiyaa Afra Geubrina Raseukiy, "Kebijakan Hukum dalam Pemenuhan Hak Atas Lingkungan yang Bersih, Sehat, dan Berkelanjutan Sebagai Hak Asasi Manusia Universal," *Jurnal Hukum Lingkungan Indonesia* 9, no. 1 (2022): 5.

⁷ Ministry of Environment and Forestry of the Republic of Indonesia, "Statistik Kinerja Pengawasan Perusahaan Ditjen Gakkum," Environmental and Forestry Law Enforcement, <https://gakkum.menlhk.go.id/kinerja/pengawasan>, 1.

number had decreased dramatically in 2020 and after the enactment of the law, the number increased until 2022. The data neither present the amount of compliance of the person in charge of the business and/or activity or indicate whether the number has decreased due to the reduction of Businesses and/or Activities, or inactive supervision.

However, there is a more detailed description in 2023. There were 4 supervisions in the natural resources sector with 2 companies not responding, 1 compliant, and 1 non-compliant. In the forestry sector, 106 companies were supervised, 53 did not respond and 53 did not comply. In the Industry, Infrastructure & Services sector, 30 companies were supervised, the results were 14 non-compliant, 1 compliant, and 15 non-responding.⁸ Based on the data above, it can be seen that many companies do not immediately respond or comply with the government. If this condition is allowed to continue, it will have a negative impact on the environment.

Some presidential and ministerial regulations on waste management and reduction determine the conduct of environmental supervision.⁹ In practice, supervision is conducted either directly or indirectly by the Environmental Supervisory Officer to assess and/or determine the level of compliance of the person in charge of the Business and/or Activity.

Supervision faces obstacles in that cause by three factors: legal substance, legal structure, and legal culture. Constraints in legal substance include overlapping supervision rules with the supervisor's authority to investigate violations.¹⁰ Problems related to legal structure mainly caused by the lack of supervision standards in the Environmental Agency or *Dinas Lingkungan Hidup* (DLH), the absence of facilities and infrastructure for Environmental Impact Assessment (EIA) report tests, and inadequate equipment, lack of supervisory officers that resulted in only small number of objects can be supervised, and ineffectiveness of sanction.¹¹ In the context of legal culture, the lack of public information on environmental information has resulted in low public awareness and businesses contributing to the problem.¹² In fact, the community can also be a social watchdog, opinion

⁸ *Ibid.*

⁹ Maskun et al., "Plastic Waste Management in Indonesia: Current Legal Approaches and Future Perspectives," *Hasanuddin Law Review* 9, no. 1 (2023): 117.

¹⁰ Hamidah Abdurrachman, Achmad Irwan Hamzani, and Joko Mariyono, "Environmental Crime and Law Enforcement in Indonesia: Some Reflections on Counterproductive Approaches," *Environmental Policy and Law* 51, no. 6 (2021): 409.

¹¹ Daniel Adiasto Pangaribuan and Harapan Tua Ricky Freddy S, "Pengawasan Dinas Lingkungan Hidup Kabupaten Toba," *Jurnal Manajemen dan Ilmu Administrasi Publik* 3, no. 3 (2021): 244; Aditya Niken Sekar Arum, "Reformulasi Penegakan Sanksi Administratif Terhadap Pelanggaran Lingkungan" (Master's Thesis, Department of Law Sebelas Maret University, 2021), 99; and Feri Ardiansyah, "Tantangan Pengawasan dan Penegakan Hukum Lingkungan Hidup Dalam Implementasi Undang-Undang Cipta Kerja," <https://mil.pasca.undip.ac.id/wp-content/uploads/2021/11/3.-Feri-Ardiansyah-15-21.pdf>.

¹² See Fajar Winarni, "Problematika Undang-Undang Nomor 11 Tahun 2020 Tentang Cipta Kerja terhadap Pemenuhan Hak atas Informasi Lingkungan Hidup," *Bina Hukum*

giver, and information provider, but low awareness due to ignorance of the environmental aspects and consequences of pollution hinders it.¹³ Next, lack of awareness of business actors and the public to comply with environmental regulations.¹⁴

In this regard, there is a need for legal reform, one of which is to conduct a comparative study with Denmark because of two reasons. First, Denmark has a good system from the central and local governments.¹⁵ Second, Denmark ranked first as the most environmentally friendly country in the world in 2022 with a score of 77.90, while Indonesia is only 28.30.¹⁶ Environmental Supervision in Denmark emphasizes strict licensing procedures and mechanisms with a broad scope and strict sanctions. The cooperation between Indonesia and Denmark has been going on since 1950 because Denmark has a vision to develop green programs.¹⁷ One of them is waste management.¹⁸ The Kyoto Protocol mandates Denmark to meet emission reduction targets. Denmark works internationally to fulfill its commitments because of its small territory.¹⁹

Lingkungan 6, no. 3 (2022): 397; Saras Ayuningtyas, Hery Nariyah, and Farida Nurfalah, "Pengaruh Pengawasan Kepala Dinas Lingkungan Hidup terhadap Efektivitas Kegiatan Usaha Laundry Sebagai Upaya Pengendalian Pencemaran Lingkungan di Kelurahan Karya Mulya Kota Cirebon," *Jurnal Ilmiah Publik* 8, no. 2 (2020): 86; and Ayuningtyas, Nariyah, and Nurfalah, "Pengaruh Pengawasan Kepala Dinas Lingkungan Hidup terhadap Efektivitas Kegiatan Usaha Laundry sebagai Upaya Pengendalian Pencemaran Lingkungan Di Kelurahan Karya Mulya Kota Cirebon," *Jurnal Ilmiah Publik* 8, no. 2 (2020): 86.

¹³ See Yurike Inna Rohmawati Ciptaningrum, Warah Atikah, and Nurul Laili Fadhilah, "Peran Serta Masyarakat Dalam Proses Penyusunan Analisis Mengenai Dampak Lingkungan Hidup," *Lentera Hukum* 4, no. 1 (2017): 79; and E Sulistyaningsih, "Community Participation in Improving Environmental Protection and Effort Management," <https://www.proquest.com/openview/da9723d35b05dfc10526e170c788a398/1.pdf?pq-origsite=gscholar&cbl=4998669>, 3.

¹⁴ Pradana and Handayani, "Pelaksanaan Fungsi Pengawasan Dinas Lingkungan Hidup Kabupaten Pacitan terhadap Pengelolaan Limbah B3 PLTU Sudimoro di Kabupaten Pacitan," 240.

¹⁵ Christoph Knill, Christina Steinbacher, and Yves Steinebach, "Sustaining Statehood: A Comparative Analysis of Vertical Policy-Process Integration in Denmark and Italy," *Public Administration* 99, no. 4 (2021): 767.

¹⁶ See Yale Center for Environmental Law Policy, "2022 Epi Results," <https://epi.yale.edu/epi-results/2022/component/epi>, 1; and Jan Burck, et al., *Climate Change Performance Index (Ccp) 2023 Results Monitoring Climate Mitigation Efforts of 59 Countries Plus the Eu – Covering 92% of the Global Greenhouse Gas Emissions* (Germany: Germanwatch, 2023), 7.

¹⁷ Septyanto Galan Prakoso, Nadia Dian Ardita, and Andriansyah Perdana Murtyantoro, "Analisis Diplomasi Soft Power Denmark Terhadap Indonesia (Studi Tentang Kerja Sama Pengelolaan Lingkungan Di Indonesia)," *Jurnal Politika Dinamika Masalah Politik Dalam Negeri dan Hubungan Internasional* 10, no. 1 (2019): 59.

¹⁸ Ministry of Environment and Forestry of the Republic of Indonesia, "Klkh Inginan Denmark Bantu Pengelolaan Sampah Di Lima Destinasi Super Prioritas," https://www.menlhk.go.id/site/single_post/2763/klkh-inginkan-denmark-bantu-pengelolaan-sampah-di-lima-destinasi-super-prioritas.

¹⁹ Kharisma Anissa Dewi, "Kepentingan Denmark Dalam Pemberian Bantuan Lingkungan Terhadap Indonesia Melalui Environmental Support Programme Phase Iii (Esp3)," *Jurnal Ilmu Sosial Indonesia (JISI)* 2, no. 1 (2021): 56.

Environmental supervision is a concept of protection and prevention of environmental pollution and/or damage that is generally implemented by various countries around the world. The terms 'Supervision' and 'monitoring' are different, nevertheless, some studies use the terms 'environmental supervision' and 'environmental monitoring' to refer to things that have relatively similar meanings.

There have been previous studies regarding the cooperation between Indonesia and Denmark. The first study was by Pradana, et. al. (2020) which examined the cooperation project between the government and Denmark in the form of IDR 46,000,000,000.00 or about 3,192,449.163 USD (USD currency worth IDR 14,409 in 2019) grant operated by PT. Bumi Pandanaran Sejahtera.²⁰ Another research is from Singarimbun (2022) which explores the cooperation between Denmark and Indonesia in developing a circular economy to overcome climate change. This cooperation is not only due to the national interests of the two countries but also intersects with the international agenda to tackle climate change, especially in the Paris Agreement and SDGs.²¹ A study by Ambarsari, et al. (2021) also discusses Environmental Support Program Phase 3 (ESP-3) for *Hutan Harapan* restoration in Jambi to increase its economic and ecological functions.²² There is also research by Dewi (2021) that states Denmark supports Indonesia and provides funds for up to three phases, namely 2005-2007, 2008-2012, and 2013-2018 for the environment.²³ However, a study by Pratiwi (2021) discovered the obstacle of Indonesia and Denmark's cooperation in waste management due to the lack of expert resources from the Indonesian government.²⁴ Then, Prakoso, et al. (2019) explained that Denmark wants to overcome global warming by working with other countries. Denmark organized the Danish International Development Agency (DANIDA).²⁵ DANIDA is the official development aid agency under the Danish Ministry of Foreign Affairs to promote and pursue sustainable development goals.²⁶

²⁰ Azaria Eda Pradana, Retno Sunu Astuti, and Budi Puspo Priyadi, "Public-Private Partnership in the Framework of Waste Management into Electrical Energy in Jatibarang Landfill, Semarang City," *Journal of Local Government Issues (Logos)* 3, no. 2 (2020): 138.

²¹ Lukas Andri Surya Singarimbun, "Analyzing the Development Cooperation between Indonesia and Denmark in Developing a Circular Economy," *Journal of World Trade Studies* 7, no. 1 (2022): 54.

²² Ningrum Ambarsari, Nathalia Fieni Maria Moi, "Bantuan Luar Negeri Denmark Terhadap Restorasi Hutan Harapan Di Jambi," *Moestopo Journal of International Relations* 1, no. 1 (2021): 12.

²³ Dewi, *op.cit.*, 51.

²⁴ Citra Ayu Pratiwi, "Kerja Sama Bilateral Indonesia Denmark Dalam Circular Economy Dan Manajemen Pengolahan Sampah Tahun 2018-2019," *Moestopo Journal of International Relations* 1, no. 2 (2021): 127.

²⁵ Prakoso, Ardita, and Murtyantoro, *op.cit.*, 64.

²⁶ Ambarsari, Moi, *op.cit.*, 5.

Previous research has not compared environmental Supervision arrangements in those two countries. Looking at the violations in the form of environmental pollution and/or damage that still exist in Indonesia, and seeing the progressive development of environmental protection in Denmark, this article aims to provide an overview of Indonesia's ideal environmental Supervision arrangements.

This paper is a normative legal research that applies statutory, conceptual, and comparative approaches. Primary legal materials are obtained from written legal documents while secondary legal materials are in form of books, journal articles, internet sites, and other literatures. The analysis is conducted prescriptively by providing an overview or formulate problems and obtain suggestions for the problem.²⁷

2. RESULT AND ANALYSIS

2.1. Current Legal Framework of Environmental Supervision in Indonesia

2.1.1. Law on Environmental Protection and Management²⁸

Supervision is one of the efforts to protect and manage the environment, which is the authority and duty of the government and local government.²⁹ The community also has equal and widest rights and opportunities for social Supervision. Therefore, the community must be involved to support implementation an economy based on sustainable development. Restrictions on community involvement also reduce the concept of a green constitution that is upheld in the Indonesian constitution.³⁰ The supervisory authority of local governments must be carried out according to the norms, standards, procedures and criteria set by the center.³¹ This Supervision is carried out on the compliance of the person in charge of the business and/or activity with business permit or approval from the central or local government.³²

The central and local governments must supervise the compliance of the person in charge of the business and/or activity. This authority can be delegated to officials or technical agencies, namely appointing environmental supervisory officials.³³ There is a classification of the duties and authorities

²⁷ Peter Mahmud Marzuki, *Penelitian Hukum* (Jakarta: Kencana, 2022), 36.

²⁸ Law No. 32 of 2009 concerning Environmental Protection and Management (Law 32/2009) *juncto* Law No. 6 of 2023 concerning Stipulation of Government Regulation in Lieu of Law No. 2 of 2022 concerning Job Creation (Law 6/2023).

²⁹ Law 32/2009, Art. 4 and 63.

³⁰ Aditya Prastian Supriyadi, "Reduksi Hak Partisipasi Publik Pada Aturan Analisis Mengenai Dampak Lingkungan Untuk Perizinan Berusaha Di Indonesia: Perspektif Green Constitution," *Jurnal HAM* 14, no. 1 (2023): 28.

³¹ Law 6/2023, Art. 63 (1).

³² *Ibid.*, Art. 72.

³³ Law 32/2009, Art. 71.

of the Central Government and Local Governments in conducting such Supervision.

The Central Government can supervise environmental permits issued by local governments if they consider serious violations in the environmental sector. When the Minister finds violations of Environmental Licensing or Central Government Approval related to Environmental Approval and laws and regulations in the environmental protection and management field when conducting Supervision, it can apply administrative sanctions to the person in charge of the business and/or activity.

Meanwhile, the duties and authorities of the Regional Government are divided into Provincial Government and Regency/City Government, namely Provincial DLH and Regency/City DLH. Environmental Supervisory Officers in Provincial DLH and Regency/City DLH are authorized to monitor, request information, make copies of required documents, enter certain places, photograph, record audiovisuals, take samples, inspect the equipment, inspect installations and/or means of transportation, and/or stop certain violations. This can be done in coordination with civil servant investigating officials within the scope of the Ministry and the Region. The person in charge of the business and/or activity is prohibited from obstructing the implementation of Supervision by the Environmental Supervisory Officer.³⁴

The environmental supervisory official in Indonesia is not proactive because they are only authorized to inspect the equipment, installations, and means of transportation. Meanwhile, Danish regulations stipulate that all equipment must obtain permits before they are used to operate. This provision should be adopted to minimize the prolonged impact on the facility.

Local governments, namely Governors and Regents/Mayors who find violations of Environmental Licensing or Central Government Approval related to Environmental Approval issued by Provincial or Regency/City Regional Governments and laws and regulations in the field of environmental protection and management when conducting Supervision, can apply administrative sanctions to the person in charge of the business and/or activity.³⁵

Officials who deliberately do not carry out such Supervision and result in pollution and/or environmental damage resulting in the loss of human life, shall be punished with a maximum prison sentence of 1 year and a maximum fine of IDR 500,000,000.00 or USD 34,700 (USD currency worth IDR 14,409 in 2019). Then, anyone who provides false information, misleads, omits information, damages information, and provides false information needed for insight, will be subject to a maximum prison

³⁴ *Ibid.*, Art. 73 and Art. 74.

³⁵ Law 6/2023, Art. 76.

sentence of 1 year and a maximum fine of IDR 1,000,000,000.00 or USD 69,401.068 (USD currency worth IDR 14,409 in 2019). Anyone who intentionally prevents, obstructs, or thwarts the supervisory duties of environmental supervisory officials and/or civil servant investigating officials is subject to a maximum prison sentence of 1 year and a maximum fine of IDR 500,000,000.00 USD 34,700 (USD currency worth IDR 14,409 in 2019).³⁶

2.3.2. Government Regulation on the Implementation of Environmental Protection and Management³⁷

Environmental protection and management are systematic and integrated efforts made to preserve environmental functions and prevent environmental pollution and/or damage. These efforts include planning, utilization, control, maintenance, supervision, and law enforcement.³⁸ This means that planning to law enforcement efforts must be systematic and integrated for the benefit of the environment by preventing pollution and/or damage to it.

Supervision actors are environmental supervisory officials who are civil servants who carry out environmental supervision and/or law enforcement. Direct or indirect supervision to determine and/or determine the level of compliance of the person in charge of the business and/or activity with the provisions stipulated in the Business License or Government Approval as well as laws and regulations in the field of environmental protection and management.³⁹ Based on the above regulations, it can be seen that supervision is carried out based on administrative documents. Determination of compliance status is also based on these documents.

Supervision is carried out based on Business Licensing or Government Approval.⁴⁰ There is a provision that the person in charge of a business and/or activity must provide access to supervisory officials to supervise following their authority. This is stated in the Environmental Feasibility Decree or *Surat Keputusan Kelayakan Lingkungan Hidup (SKKLH)*.⁴¹

Regarding water and air pollution prevention, the government under its authority verifies the Technical Approval to see the suitability of technical standards for compliance with Wastewater Quality Standards and/or Emissions with the construction of facilities and infrastructure carried out and ensure their function. The result will be determined as fulfilling or not

³⁶ *Ibid*, Arts. 112, 113, 114, and 115.

³⁷ Government Regulation of the Republic of Indonesia No. 22 of 2021 concerning the Implementation of Environmental Protection and Management

³⁸ Government Regulation of the Republic of Indonesia No. 22 of 2021 concerning the Implementation of Environmental Protection and Management, Art. 1 (2) and (98).

³⁹ *Ibid.*, Art. 1 (2) and (98).

⁴⁰ *Ibid*, Art. 49.

⁴¹ *Ibid*.

fulfilling. If it is compliant, then the government will issue a Commissioning Certificate or *Sertifikat Laik Operasi* (SLO). This SLO becomes the basis for the government to conduct Supervision. However, if it does not meet, the person in charge must make improvements to the facilities and infrastructure and/or changes to the Environmental Agreement as stated in the minutes until the Wastewater Quality Standard and/or Emission Standard is met. If not implemented, then the supervisory official conducts Supervision.⁴² This provision is ineffective because supervisory officials will only supervise without a solution. The person in charge is also not sanctioned for non-implementation of the order. As a result, water pollution is less preventable if this condition continues without sanctions.

Concerning the collection of hazardous and toxic waste or *Bahan Berbahaya dan Beracun* (B3), the SLO is also the basis for the commencement of Supervision of the compliance of the person in charge of the business and/or activity in the Business Licensing for the Collection, Utilization, Processing and Landfilling of B3 Waste.⁴³ The overall Supervision fee is allocated from the State or Regional Budget following the provisions of laws and regulations.⁴⁴

Information on Supervision and application of administrative sanctions can be found in the electronically integrated Environmental Information System.⁴⁵ Local governments submit reports on the implementation of Supervision and application of administrative sanctions to the Minister who then integrates them into the system. This system at least contains the status of compliance of the holder of the Business License or Government Approval related to the Environmental Approval and the status of follow-up of the supervision results.⁴⁶ This provision accommodates real-time information but does not specifically regulate who can access the Environmental Information System. This differs from Denmark, which publishes the supervision results periodically so that the public knows about it and is directly involved. Then, suppose the general public can access the Environmental Information System. In that case, real time information regarding Supervision has not been detailed when viewed from the website of the Environmental Information System for the Special Capital Region or *Daerah Khusus Ibukota* (DKI) Jakarta.⁴⁷ In addition, it still needs to re-develop the site to provide complete information.

⁴² *Ibid*, Art. 142 and Art. 201.

⁴³ *Ibid*, Art. 307 up to 387.

⁴⁴ *Ibid*, Art. 448.

⁴⁵ *Ibid*, Art. 480.

⁴⁶ *Ibid*, Art. 488.

⁴⁷ DKI Jakarta Provincial Environment Agency, "Sistem Informasi Lingkungan Dan Kebersihan Daerah Khusus Ibukota Jakarta," <https://silika.jakarta.go.id/>.

In addition, information disclosure is also still a problem.⁴⁸ One case that demonstrates this is Decision No. 374/Pdt.G/LH/2019/PN.Jkt.Pst. filed by local residents due to the non-fulfilment of the right to a good and healthy environment by the DKI Jakarta Provincial government. The reason was that the Governor of DKI Jakarta did not conduct an emission inventory. Whereas emission inventories have been conducted by non-governmental organisations and given to the government as recommendations. This emission inventory is to obtain information on the amount of emissions that should be the basis for determining air pollution recovery measures. This emission inventory must also be informed in a document that includes public information so that public participation is encouraged by fulfilling the right to access information. The Minister of Environment and Forestry is also negligent in providing guidance and Supervision to the performance of the Governor of DKI Jakarta in controlling air pollution. The Governor of DKI Jakarta also failed to provide air quality monitoring stations or develop strategies and action plans to restore Jakarta's air quality.⁴⁹

The Minister guides the government, the person in charge of business and/or activities to the community. It also includes environmental stewards. The guidance includes Business Licensing and Government Approval, protection and management of water and air quality, control of marine pollution and damage, B3 waste management, and/or other technical loads following laws and regulations. The Minister is authorized to supervise the compliance of the person in charge of the business and/or activity, including Business Licenses associated with environmental approvals issued by the government or government approvals. The governor supervises documents issued by the provincial government, and the regent/mayor supervises the compliance of documents issued by the regency/city government. If the Business License or government approval related to environmental approval requires SLO and has not been fulfilled, the Minister, governor, or regent/mayor following their authority shall supervise other obligations in the environmental approval. SLOs that are not fulfilled do not require sanctions for the person in charge of the business and/or activity. The government's reaction to this is only limited to conducting Supervision and this is a diversion from the obligations of the person in charge of the business and/or activity in the form of SLOs.⁵⁰ This action is

⁴⁸ Nadira Tatyana and Achmad Ramadhandy Y. Putra, "Pemenuhan Hak Atas Akses Informasi Lingkungan Hidup Dan Partisipasi Publik Terhadap Pencemaran Udara DKI Jakarta," *Jurnal Hukum Lingkungan Indonesia* 8, no. 2 (2022): 378.

⁴⁹ Citizen's Lawsuit against Jakarta's Air Pollution (Citizen's v. Government), Judgement, Central Jakarta District Court Decision Number 374/Pdt.G/Lh/2019/Pn.Jkt.Pst, 2019. Paragraph 3.

⁵⁰ Government Regulation of the Republic of Indonesia No. 22 of 2021 concerning the Implementation of Environmental Protection and Management, Art. 490 up to 496.

not a solution but a diversion from Supervision. Furthermore, regarding the authority of environmental supervisory officials, the authority follows the provisions in Law No. 6/2023. Supervision is carried out in two ways. Direct Supervision, namely by conducting periodic site visits. Indirect Supervision reviews the report data of the person in charge of the business and/or activity and/or data from the Environmental Information System. If indirect Supervision indicates repeated violations or indications of serious threats to the environment, the supervisory official conducts direct Supervision.

Regular Supervision follows the plan annually based on the Business License or Government Approval related to Environmental Approval and/or other information. The stages of Regular Supervision are planning, implementation, and evaluation. Planning includes inventory, document identification, and determining business priorities with direct Supervision. Supervision implementation includes preparation, compliance checks, and follow-up of supervision results. Supervision evaluation is conducted to measure the plan's success rate with implementation and provide feedback for supervision improvement.⁵¹ Meanwhile, incidental Supervision is carried out if it meets the criteria for indications of repeated violations and detected violations, complaints from the community, and/or reports from area managers on violations of detailed Environment Management Plan-Environment Monitoring Plan or *Rencana Pengelolaan Lingkungan-Rencana Pemantauan Lingkungan* (RKL-RPL) implementation by business actors in the area.⁵²

The provision does not emphasize that it will involve the community in every stage of environmental monitoring. The community is the party directly affected, so to minimize environmental pollution and/or damage caused by the person in charge of the business and/or activity, the community must be involved at least in the implementation and evaluation of supervision. The idea contained in this regulation is that community involvement only exists when the environment has been impacted, not at the supervision stage. The form of community involvement in the supervision implementation stage is to invite the community to directly visit the business and/or activity in question and hold a hearing on the impacts caused by the business and/or activity. Meanwhile, at the supervisory evaluation stage, the government also reconfirms compliance and the presence or absence of pollution and/or damage caused by business actors to the community.

If a violation has occurred by the person in charge of the Business and/or Activity and even poses a serious threat to the environment, the Environmental Supervisory Officer stops the violation. The purpose of

⁵¹ *Ibid*, Art. 497.

⁵² *Ibid*, Art. 498.

stopping the violation is to prevent a greater and wider adverse impact on the environment and to prevent a greater and wider loss. The cessation can be in the form of closure of wastewater disposal channels, demolition of wastewater disposal channels, cessation of emission source operations, closure of waste disposal sites, and/or other actions. Termination can be done by putting up a termination sign. The supervisory officer also makes a cessation report.⁵³

The direct and indirect Supervision results are outlined in the minutes of Supervision and the results contain facts and findings. The report contains the status of compliance and conclusions. If the conclusion is not complied with, the supervisory official provides recommendations for law enforcement follow-up, including administrative, civil, and/or criminal to the Minister, governor, or regent/mayor according to their authority.⁵⁴ In addition, there is a second layer of Supervision, namely by the Minister to the person in charge of the business and/or activity if the Minister assesses that there are serious violations in the field of environmental protection and management, and the governor and/or regent/mayor does not carry out Supervision.⁵⁵

2.3.3.Regulation of the Minister of Environment and Forestry on Procedures and Requirements for Hazardous and Toxic Waste Management

Regulation of the Minister of Environment and Forestry of the Republic of Indonesia No. 6 of 2021 concerning Procedures and Requirements for Hazardous and Toxic Waste Management only explains that supervision of waste storage activities is carried out during the placement and/or removal of B3 waste from the storage room and its administration procedures. Next, there is also supervision during the filling and/or emptying of tanks and/or containers, and silos for storing hazardous waste along with housekeeping.

In addition, supervision is also carried out during the placement and/or retrieval of B3 waste from the B3 waste pile and its administration. Supervision is also carried out during the filling and/or collection of B3 waste from waste impoundment and its administration.

If there is a violation of the provisions of laws and regulations in the field of hazardous waste management from the results of supervision, or if the request of the transporters, utilizers, processors, collectors or hoarders of hazardous waste, the Director General is authorized to freeze the Electronic Manifest account used for monitoring of waste management activities to prevent environmental pollution. The basis for monitoring the

⁵³ *Ibid*, Art. 499.

⁵⁴ *Ibid*, Art. 500.

⁵⁵ *Ibid*, Art. 504.

compliance of the person in charge of the Business and/or Activity in Business Licensing related to B3 waste management is Commissioning Certificate in Hazardous and Toxic Waste Management or *SLO di bidang Pengelolaan Limbah B3* (SLO-PLB3).

2.4. Current Legal Framework of Environmental Supervision in Denmark

2.4.2. Danish Land Pollution Act

In *Lovbekendtgørelse (LBK) Nr 282 af 27/03/2017 Jordforureningsloven* (Danish Land Pollution Act), Denmark, in the first part of this rule expressly declares that the law must protect nature and the environment so that development can occur sustainably, respecting human life and human life and conserving animals and plants. Denmark seems to be gearing up to treat waste with the more environmentally friendly 'reuse' or Preparing for Reuse (PFR) than recycling.⁵⁶

The Danish Minister for Environment and Food may lay down rules on digital communication, including certain information technology systems, special digital formats, digital signatures for Surveillance by supervisory authorities and the results of such activities. The Minister for Environment and Food may also lay down rules that digital communications should be used to submit reports by regional and local councils on mapping and monitoring activities. Denmark has adopted an integrated system within the scope of monitoring, results, and report submission.⁵⁷

Supervisory authorities on contaminated soil must make detailed rules to detect pollution sources. Denmark emphasizes that there are strict measures in case of soil pollution and orders the person in charge of the water source to be notified so that the water source is not polluted and the government maps the location of groundwater according to its susceptibility to pollution.⁵⁸ The supervisory authority may refrain from dealing with matters deemed less important to protect the environment.⁵⁹

Owners of immovable property must notify the supervisory authority if soil contamination is underneath. Groundwater management in Denmark is excellent as the country relies heavily on groundwater, such as drinking

⁵⁶ Rikke Marie Moalem, et al., "Struggles over Waste: Preparing for Re-Use in the Danish Waste Sector," *Waste Management & Research: The Journal for a Sustainable Circular Economy* 41, no. 1 (2023): 114.

⁵⁷ *LBK Nr 282 Af 27/03/2017 Jordforureningsloven* (Danish Land Pollution Act), Art. 64.

⁵⁸ Jens Aamand, et al., "Mapping Groundwater Vulnerability to Pesticide Contamination through Fractured Clays Clayfrac," https://backend.orbit.dtu.dk/ws/portalfiles/portal/269111935/CLAYFRAC_report_final_978_87_7038_375_2.pdf, 7.

⁵⁹ *LBK Nr 282 Af 27/03/2017 Jordforureningsloven* (Danish Land Pollution Act), Art. 67.

water, industry, and agriculture. For this reason, water sources are highlighted when there is soil pollution.⁶⁰

If environmental offenses pose a serious threat to health, then government intervention is required to prevent the spread of pollution. Therefore, the regulatory authority is allowed to take necessary measures without an order. The decision is also not appealable to the administrative authority. This means that Denmark gives the regulatory authority broad powers to protect the environment.⁶¹ Necessary interventions within the powers of the regulatory authority to protect the environment are also strongly encouraged.

The supervisory authority may conduct investigations by requesting the person in charge to clarify or provide necessary information. Furthermore, the supervisory authority may also decide for a limited period to conduct self-monitoring, which the entrepreneur shall carry out at the entrepreneur's expense.⁶² Denmark may require the entrepreneur to take responsibility by providing the necessary information and clarifications and, if necessary, to cover the entire cost of the self-monitoring carried out by the supervisor. This has not been applied in Indonesia concerning government coercive administrative sanctions.⁶³ Supposedly, entrepreneurs are still required to finance the implementation of government coercive sanctions. For example, the government imposes sanctions on the person in charge of the business and/or activity at the total cost of the business actor until the government's coercive sanctions successfully restore the environment.

Fines and criminal sanctions will be imposed if Article 73 b is not complied with, and removing or altering equipment installed by the supervisory authority. If it is intentional or due to negligence, causes damage and harm to the environment, and aims to increase financial gain for oneself, it will be subject to imprisonment for a maximum of two years. If the offence is committed for personal gain, forfeiture will be imposed even if the offence does not cause damage or harm to the environment. If confiscation is not possible, then this shall be taken into consideration to impose an additional fine.⁶⁴ This means that the primary sanction is confiscation of property. However, a fine will be imposed as a substitute if this is

⁶⁰ Lisbeth Flindt Jørgensen, Karen G. Villholth, and Jens Christian Refsgaard, "Groundwater Management and Protection in Denmark: A Review of Pre-Conditions, Advances and Challenges," *International Journal of Water Resources Development* 33, no. 6 (2017): 871.

⁶¹ *LBK Nr 282 Af 27/03/2017 Jordforureningsloven* (Danish Land Pollution Act), Art. 68.

⁶² *Ibid*, Art. 73.

⁶³ Andri Gunawan Wibisana, "Tentang Ekor Yang Tak Lagi Beracun: Kritik Konseptual Atas Sanksi Administratif Dalam Hukum Lingkungan Di Indonesia," *Jurnal Hukum Lingkungan Indonesia* 6, no. 1 (2020): 64.

⁶⁴ *LBK Nr 282 Af 27/03/2017 Jordforureningsloven* (Danish Land Pollution Act), Art. 88.

impossible.

Indonesia and Denmark adopted the imposition of administrative sanctions that do not eliminate criminal sanctions if the environmental offenses committed are too severe. However, Indonesia still needs to regulate the replacement of installed equipment by environmental inspectors and other sanctions if confiscation sanctions cannot be carried out. Therefore, this rule can be adopted.

2.4.3. Danish Environmental Protection Act

LBK Nr 5 af 03/01/2023 Miljøbeskyttelsesloven (Danish Environmental Protection Act) precisely states that the Minister may establish regulations on pollution of enterprises, facilities, machinery, equipment, means of transportation, pollution from wastewater plants, purification plants, incinerators, changes in substances, purity levels, establishment, expansion of enterprises. The Danish incinerator system has a good environmental impact, meeting 10 of 14 categories. It is also better than German incineration.⁶⁵ Not only that, the Minister can also stipulate rules on the obligation to notify the supervisory authority regarding the use of raw materials by the enterprise, the production of waste, the temporary location of the enterprise, the use of microorganism biotechnology, and any discharge into the environment. There is also a rule that the equipment used must have approval from the government. It means that Denmark emphasizes that the government intervenes in all company operations processes to reduce waste.

The Minister of the Environment may lay down regulations on inspection supervision and revocation of the Authorisation if the authorized person commits serious or repeated negligence. Denmark also establishes an ecolabelling scheme and the Minister determines the users of the label. The Ecolabel indicates that the product is environmentally friendly and recyclable. In addition to covering the costs of managing the Ecolabel scheme, the Minister can also provide grants to organisations that handle the management of the Ecolabel scheme.⁶⁶[\[1\]](#) An ecolabelling scheme is very likely to be implemented in Indonesia. The aim is to show the company's track record and the production process for distribution and consumption, especially for packaged food products.⁶⁷ This ecolabelling scheme can be applied in Indonesia as an incentive for businesses and/or activities to

⁶⁵ Morten Bang Jensen, Jacob Møller, and Charlotte Scheutz, "Comparison of the Organic Waste Management Systems in the Danish–German Border Region Using Life Cycle Assessment (Lca)," *Waste Management* 49, no. 1 (2016): 497.

⁶⁶ *LBK Nr 5 Af 03/01/2023 Miljøbeskyttelsesloven* (Danish Environmental Protection Act), Art. 8a.

⁶⁷ Tazkia Nafs Azzahra and Yobel Manuel Oktapianus, "Menilik Peluang Penerapan Label Karbon (Carbon Labelling) Pada Kemasan Produk Makanan Di Indonesia Sebagai Instrumen Pemulihan Lingkungan," *Jurnal Hukum Lingkungan Indonesia* 8, no. 2 (2022): 328

comply with environmental laws and regulations, fulfil human rights related to environmental information and encourage public participation.

The Minister of the Environment stipulates rules on the obligation of manufacturers and importers to provide information and documentation on the return scheme. In addition, there are rules on the use of company vehicles in the form of approval of vehicles with filters, registration of vehicles, revocation of approval, and inspection of such vehicles. Concerning transportation, environmental supervisory officials in Indonesia are only authorized to inspect equipment, installations, and/or transportation.⁶⁸ This rule can be adopted to minimize pollution and/or environmental damage caused by equipment to operate.

If a wastewater plant is not functioning properly, the Danish supervisory authority may order that the facility be repaired or upgraded. Such changes may also include new requirements if necessary. Then, if the pollution cannot be addressed, operations may also be prohibited. The facility must be closed when no more waste can be disposed of at the operation of the sewerage facility. This closure must be notified in advance to the supervisory authority. The Minister stipulates that whoever operates the sewage facility, must provide detailed information to the supervisory authority to reassess the condition of the facility.⁶⁹ This provision can be adopted because the regulation of wastewater treatment plants in Indonesia only covers the design of the plant as a technical standard, the person in charge of the operator of the wastewater treatment plant, the requirements to be able to operate and maintain the wastewater treatment plant, the standard operating procedures for emergency response of the wastewater treatment plant, and the description of the system.⁷⁰

Denmark also stipulates that if a company causes pollution, the supervisory authority may order the pollution to be reduced and necessary measures taken. If the pollution cannot be reduced, operations can be banned, and the company must relocate for up to eight years. The Danish Ministry of Environment and Food is implementing the Environmental Technology Development Programme in collaboration with the Danish Technological Institute to produce water-based environmentally friendly paints to reduce pollution.⁷¹

To implement the promotion of recycling and cleaner technologies and limit waste management problems, the Danish Minister of the Environment may lay down rules that those who offer, trade, or distribute goods,

⁶⁸ *LBK Nr 5 Af 03/01/2023 Miljøbeskyttelsesloven* (Danish Environmental Protection Act), Art. 9h.

⁶⁹ *Ibid*, Art. 30.

⁷⁰ Government Regulation of the Republic of Indonesia No. 22 of 2021 concerning the Implementation of Environmental Protection and Management, Art. 138 up to 254.

⁷¹ Jan Lorenzen and Søren Poulsen, "Eco-Friendly Production of Waterborne Paint," <https://www2.mst.dk/Udgiv/publications/2021/05/978-87-7038-302-8.pdf>, 4.

including packaging, must provide certain information about the product or contribute to the promotion of recycling and cleaner technologies. Concerning expropriation, the local county council may decide to expropriate wastewater facilities, sewage management, and disposal systems if necessary.⁷² The Danish government plays a role in the supply, trade and distribution of goods to implement cleaner technologies. Indonesia can adopt this as a motivation for entrepreneurs to demonstrate that their companies support environmentally friendly operations.

The Minister supervises listed companies that discharge wastewater into rivers, lakes or the sea. The supervisory authority may also revise the approval or license of the company to improve its Supervision. In addition, the supervisory authority must also report the implementation of the approval to the Minister of the Environment if the company does not comply with environmental requirements.⁷³

Supervisory authorities may also obtain information up to personal data from other public bodies to carry out supervisory duties in the context of control. The supervisory authority also has access to public and private property, premises, and transport for proper identification without a court order if necessary to conduct surveillance.

Then, a fine may be imposed on a person who does not fulfil the provisions of Article 70b related to environmental control at the company's expense, or removes, or alters equipment placed by the supervisory authority to protect the environment. This provision applies if no more severe sanctions are specified in other rules.⁷⁴ Indonesian regulations do not yet accommodate sanctions for companies that intentionally alter equipment placed by the supervisory authority.

2.4.4. Executive Order on Danish Environmental Supervision

Bekendtgørelse (BEK) Nr 1536 Af 12/9/2019 *Miljøtilsynsbekendtgørelsen* (Executive Order on Danish Environmental Supervision) complements the Danish Environmental Act as a more detailed supervision order. Surveillance is any form of supervisory activity, including activities that are part of the planning, preparing, and executing special surveillance visits, administrative controls, and follow-up in the form of reporting and enforcement to ensure companies comply with the legislation underlying this order. Supervision in Denmark also takes the form of reassessment of approvals issued concerning environmental approvals.⁷⁵

⁷² *LBK Nr 5 Af 03/01/2023 Miljøbeskyttelsesloven* (Danish Environmental Protection Act), Art. 58.

⁷³ *Ibid*, Art. 63.

⁷⁴ *LBK Nr 5 Af 03/01/2023 Miljøbeskyttelsesloven* (Danish Environmental Protection Act), Art. 110.

⁷⁵ *BEK Nr 1536 Af 09/12/2019 Miljøtilsynsbekendtgørelsen* (Executive Order on Danish Environmental Supervision), Art. 2.

The supervisory authority shall prepare an environmental inspection plan, a general assessment of environmental issues in its area of authority, supervision efforts, organization and execution of visits, active inspections, and emergency inspections when there are complaints and cooperative relations with other relevant authorities. In addition, everyone has the right to comment on the plan within four weeks. The inspection plan must be updated at least once every four years.⁷⁶

There are four categories of Supervision applied in Denmark. First, Basic Inspections are planned physical and administrative surveillance of companies that include monitoring compliance with rules in executive orders. Second, Priority Inspections are in addition to planned basic inspections when the company has a high level of risk in the environmental risk assessment. These inspections consist of physical or administrative inspections. Companies with a high environmental risk score must conduct one or more planned inspections within three years. Third, Inspection Campaigns are planned environmental monitoring efforts conducted twice each year. The supervisory authority publicizes the overall conclusions of the inspection campaign including objectives, impacts, and titles. Fourth, Start-up Supervisions are physical surveillance of enterprises belonging to a certain category that covers all environmental conditions of the enterprise and identifies relevant areas to prevent accidents or damage that pollute the environment.

Denmark uses five parameters to assess a company's risk with different values: use of environmental management systems (20%), regulatory compliance (30%), storage of chemicals or hazardous substances (16.5%), emissions to air, land or water (16.5%), and proximity to environmentally sensitive areas (17%). This risk-based approach is effective as it helps authorities identify companies that violate environmental regulations. As a result, all companies with high environmental risks have complied with legal actions.⁷⁷ In Annex I on Environmental Risk Assessment, the supervisory authority must also actively monitor and respond quickly in the event of significant environmental complaints or environmental accidents. Furthermore, a decision on the subject of Supervision must also be identified within a maximum of six months.⁷⁸

If the supervisory authority follows up on an order or prohibition, or there is an appeal against, it must also announce its conclusion. The announcement of conclusions by the supervisory authority demonstrates transparency, ensuring that the information is not contrary to the law. Denmark also accommodates information disclosure in *BEK Nr 1536 Af*

⁷⁶ *Ibid.*, Art. 20.

⁷⁷ *OECD, op.cit.*, 110.

⁷⁸ *BEK Nr 1536 Af 09/12/2019 Miljøtilsynsbekendtgørelsen* (Executive Order on Danish Environmental Supervision), Art. 21.

12/9/2019 *Miljøtilsynsbekendtgørelsen* (Executive Order on Danish Environmental Supervision).⁷⁹

Some aspects that still pertain to environmental Supervision in Denmark are the supervisory officials themselves. The number of stakeholders in Denmark is sufficient, and the period of involvement of the stakeholders is also short, thus minimizing collusion. Furthermore, environmental supervisors in Denmark are not accredited, but according to their educational background and experience, they are trained by the Danish local government.⁸⁰ Denmark also applies EIA with a mechanism different from other countries and more effective than the Netherlands and the UK. The reasons are that Danish authorities play a more active role than the Netherlands and the UK, the Danish EIA is better communicated to businesses and competent authorities than in the Netherlands, the Danish EIA plays a higher role in the decision-making process than in the Netherlands, and Danish EIA is more cost-effective than the Netherlands. Danish EIA can influence the competent authorities. Good public influence is due to an affordable and accessible complaint system. The EIA is submitted by the party applying for the business license with complete information provided by its consultant, and the regional authority prepares the document. The authority may request a consultant to conduct the assessment, but the responsibility remains with the supervisory authority. The EIA must be complete and directly or indirectly benefit living things, soil, water, air, climate and landscape, material assets and cultural heritage, and the interactions between these factors.⁸¹

2.4.5. The Observance of Danish Environmental Law to European Law

The European Union (EU) and its member states have common interests in many areas. The EU has adopted more than 500 directives on environmental protection, such as air pollution, water, and waste disposal prevention.⁸²

One of the environmental issues addressed by EU countries is pollution. Denmark and the Nordic countries are trying to solve the pollution problem with the Nordic Environmental Protection Convention (NEPC) signed in 1974 by environment ministers from Denmark, Norway,

⁷⁹ *Ibid*, Art. 20.

⁸⁰ *OECD, op.cit.*, 109.

⁸¹ See Ivar Lyhne et al., "Theorising Eia Effectiveness: A Contribution Based on the Danish System," *Environmental Impact Assessment Review* 62 (2017): 245-47; and Sarah Humboldt-Dachroeden, Birgitte Fischer-Bonde, and Gabriel Gulis, "Analysis of Health in Environmental Assessments-a Literature Review and Survey with a Focus on Denmark," *International Journal of Environmental Research and Public Health* 16, no. 22 (2019): 10.

⁸² Shekoufeh Nikfar and Shilan Mozaffari, "European Union and Its European Commission," in Reference Module in Biomedical Sciences <https://doi.org/10.1016/B978-0-12-824315-2.01076-9>, 1.

Finland, and Sweden.⁸³ In addition, there is also the influential EU directive, the WFD. Of the three signatory countries, Denmark, the Netherlands and France, Denmark has implemented it with high ambition, diligently, thoroughly, and with a formal approach.⁸⁴ However, the Danish Environmental Act still has shortcomings, some of which are The Health Impact Assessment (HIA), which needs to be included in EIA in Denmark. Denmark only mentions health impacts associated with hazardous waste. Denmark does not require HIA in EIA because it is considered to require months. In fact, very few Danish authorities are aware of HIA because the latest guidelines for HIA in Denmark are more than ten years old. Denmark is confident its EIA is safe because it is detailed and extensive. However, Denmark does not rule out the possibility that HIA may later be applied in EIAs for some instances to raise environmental awareness.⁸⁵

2.5. The Expected Legal Reform of Environmental Supervision in Indonesia: Lesson Learned from Denmark

Based on the legal framework, analyses, and facts described in this paper, several things need to be improved regarding environmental monitoring regulations in Indonesia. These improvements can adopt some rules from Denmark, some of them concern the roles of the government, business actors, and the community. For the government, the rules that can be adopted are that environmental supervisory officials approve the use of equipment and installations for company operations, not just supervise them; the provision of detailed and broad information disclosure to the public is accommodated to fulfil the right to environmental information, including the results of the company's risk level assessment; supervisory officials are authorised to intervene in companies without the approval of their superiors in the event of severe pollution to prevent widespread impacts and losses; arrangements regarding the application of government coercive administrative sanctions that must be enforced at the expense of business actors; the government regulates the approval of the use of raw materials, ecolabelling schemes so that business actors are encouraged to protect the environment and encourage community participation; supervisory officials are authorised to order repairs or upgrades to wastewater treatment plants if they are not functioning correctly; in the event of pollution, supervisory officials are authorised to prohibit the

⁸³ Melina Antonia Buns, "Making a Model: The 1974 Nordic Environmental Protection Convention and Nordic Attempts to Form International Environmental Law," *Scandinavian Journal of History* 48, no. 1 (2022): 99.

⁸⁴ Duncan Liefferink, Mark Wiering, and Yukina Uitenboogaart, "The Eu Water Framework Directive: A Multi-Dimensional Analysis of Implementation and Domestic Impact," *Land Use Policy* 8, no. 4 (2011): 715.

⁸⁵ Humboldt-Dachroeden, Fischer-Bonde, and Gulis, "Analysis of Health in Environmental Assessments-a Literature Review and Survey with a Focus on Denmark," 10.

operation of such plants, not only paying attention to the design of the plant and its administrative requirements; there is authority for supervisory officials to obtain personal information of business actors in the context of environmental protection in the context of supervision; conceptualised, planned, directed and comprehensive supervision in every place and administratively accountable; effective and participatory EIA as it involves the public in a good, affordable and accessible complaint system; an excellent vertical integration system; and adequate supervisory officials, working according to their educational background, experienced and trained by the Danish Regional Government.

The advantages of Indonesia regulating these matters in order are that the equipment and installations used for operations will be more guaranteed not to pollute or damage the environment; environmental information submitted by the public to fulfil their rights and actively encourage the public to be critical and active in protecting the environment; supervisory officials can also effectively and efficiently prevent severe pollution impacts without being constrained by a slow bureaucratic system in emergencies; the function of ensuring the enactment of government coercive sanctions is because environmental restoration is more important than sanctions as punishment and binding business actors to be genuinely responsible; supervisory officials who are authorised to order repairs or upgrades to the installation so that waste is treated correctly; comprehensive and systematic supervision will be easily accountable and more binding; effective and participatory EIA is able to protect the environment; and competent supervisory officials will make supervision more effective.

Meanwhile, legal improvements for business actors, namely business actors are required to make informative product packaging related to their support for recycling; prohibition of deliberately changing equipment installed by supervisory officers and if violated, it will be subject to sanctions; obligation to obtain approval from the government regarding raw materials, installations, equipment used; cooperative in providing opportunities for supervisory officers in carrying out their duties. Then, arrangements for the community, namely the obligation to participate in the preparation of EIA and actively find out environmental information as the fulfillment of their rights through the system provided.

The advantages of these arrangements for business actors and the community are encouraging community involvement in minimising waste, being orderly with the installation of supervisory officials; licensing the use of raw materials to equipment to ensure better environmental protection; supervision that takes place very well; and increasing awareness of the importance of environmental protection.

3. CONCLUSION

The adoption of Danish supervision regulations complements the shortcomings of Indonesia's regulation and addresses the constraining factors of environmental law enforcement. Some of the regulations in Denmark that can be adopted are the extent of the authority of supervisory officials, namely covering locations, raw materials, equipment used, product distribution, interventions on companies, being able to obtain information on business actors from other institutions for law enforcement purposes; officials with the appropriate background and number of needs; sanctions that are firmer and ensnare violators; and an excellent vertical integration system. With this adoption, the regulation in Indonesia will also become more comprehensive and measurable to protect the environment significantly.

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