

## OPTIMISING THE USE OF MOTOR VEHICLE EMISSION TESTS AND PROVIDING SANCTIONS TO REDUCE AIR POLLUTION

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### Abstract

The problem of air pollution that results in deteriorating air quality in Indonesia, especially in the area of Jakarta and its surroundings recently, is broadly caused by the density of transportation, which results in excessive emission of emission gases. The government then took preventive steps by issuing an instruction from the Ministry of Home Affairs, one of which mandated tightening emission tests as a form of reducing air pollution in accordance with the provisions of the applicable laws and regulations. The use of vehicle emission tests as part of the response of the state and government to participate in the welfare of the people in accordance with the legal theory of the welfare state initiated by Krenenburg.

**Keywords:** emission gas, air pollution, emission test.

### Introduction

Environmental and air quality issues have recently become hot topics of conversation at the national and even international levels. The recent deterioration in air quality is caused by air pollution that cannot be controlled properly, especially in Jakarta and its surroundings. The physical development of cities and industrial centres and an increase in population, which has an impact on increasing the amount

of transportation use, are the causes of the emergence of air pollution problems that deserve attention. Air is an important factor in life. In this modern era, in line with the physical development of cities and industrial centres as well as the development of transportation, air quality has changed due to air pollution. Changes in one of the air compositions from normal conditions caused by the inclusion of contaminants (in the form of gases and small particles or aerosols) into the air for a certain period of time or for quite a long period of time can disrupt the lives of humans, animals, and plants.<sup>1</sup>

On August 27, 2023, Jam 12.00 will be listed on the official AQAir website as a monitoring device that measures and monitors air quality in real-time. Air pollution levels are declared unhealthy with an air quality index of 169 US AQI and the main pollutant PM2.5 at X18.2. This causes Jakarta, Indonesia, to be ranked as the most polluted city in the world. especially at several points in Jakarta and its surroundings, such as South Tangerang with an AQI of US 169, the city of Depok in West Java with an AQI of US 167, and the city of Bandung with an AQI of US 156. Even several big cities in Indonesia also touch the air quality index above 150 US AQI. Meanwhile, the cleanest city for pollution in the world is Oslo, Norway, with only 7 US AQI. The air quality index that is suitable for breathing, according to AQAir, is 100. If the AQI has exceeded 100, then the air can be said to be unsuitable for breathing.<sup>2</sup>

The data above illustrates how bad the Indonesian Air Quality Index is, especially in Jakarta and its surroundings, making it unfit for breathing. Poor air quality in Indonesia, especially in Jakarta and its surroundings, certainly does not just happen. Population density in Jakarta and surrounding areas is the embryo of a population problem that is so complex, especially in the context of the environment and air quality, starting from the reduced green space, which is replaced by skyscrapers and mushrooming residential buildings, to the increasing means of transportation (motorised vehicles) as part of the community's need for activities that have an impact on the birth of new problems such as traffic jams and increased air pollution.

The vehicles used in Indonesia are usually two- or four-wheeled motorised vehicles. A few percent are heavy vehicles for transporting goods. Based on data from the Korlantas Polri quoted by Indonesian media, the increasing growth of motorised vehicles in Jakarta was recorded from 2018 to 2022. The number of motorised vehicles in DKI Jakarta was always increasing. In 2018, the number of vehicles in DKI Jakarta reached 22,982. This number continues to increase over time. In mid-2023, there were 23 million vehicles in Jakarta. The increase in the volume of vehicle density certainly also adds to air pollution, which has implications for poor air quality in Jakarta and its surroundings, especially in the last few days, when the air has looked as thick as black clouds.

COVID-19 pandemic occurred, The Ministry of Environment and Forestry (KLHK) explained that the two main sources of air motorisedakarta are from motorized vehicle exhaust and power plants. The Director General of Environmental and Forestry Law Enforcement (Gakkum) of the Ministry of Environment aSani,

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<sup>1</sup> Ismiyati, Devi Marlita, dan Deslida Saidah, "Pencemaran Udara Akibat Emisi Gas Buang Kendaraan Bermotor", *Jurnal Manajemen Transportasi & Logistik (JMTransLog)*, Vol. 01 No. 03, November 2014, hlm. 242

<sup>2</sup> [Jakarta air quality map | IQAir](#) 27 Agustus 2023

statedorestry, Ratio Ridho Sani(Wednesday, Augustess c2023)y 23, August 2023) stated that the first source of airmotorisedn in Jakarta is motorized vehicles, and the sactivities,rom industrial activities incluthemng power plants within it and open burning activities carried out by the community or other parties. From what was conveyed by the Director General of Law Enforcement of the Ministry of Environment and Forestry, we cthread:ommon thread that the reason for the increase in pollution in the capital city of Jakarta and its surroundings was idasfied from motorised vehicles and several industrial activities. This can also be supported and proven by the fact that the 2020 air quality index occurred when the Covid-18 Pandemic occurred which resulted in several daily activities being limited and some office work being carried out safely. *Work From Home (WFH)* Indonesia is ranked 9th in the world in AQAir's air quality monitoring. That is, the enactment of work from home activities in 2020, which reduce transportation activities in Jakarta and surrounding areas, greatly impacts the air quality index in the area. This indicates that motorised vehicle transportation is one of the main sources of increasing air pollution, which has implications for the recent deterioration of air quality.

The deteriorating air quality also has an impact on the deteriorating health of the population living in polluted environmental areas, which has implications for the emergence of health problems, especially respiratory problems.<sup>3</sup> So it can be concluded that the problem of air pollution due to air pollution, which has an impact on reducing air quality and the environment, is part of the human rights issue that is important to pay attention to and solve immediately. Because the right to get a good and healthy environment, including breathing good quality air, is part of human rights, which have been regulated in Article 28H paragraph 1 of the 1945 Constitution of the Republic of Indonesia, namely: People have the right to live in physical and spiritual prosperity, to have a place to live, to have a good and healthy living environment, and to obtain health services". Because the right to a good and healthy environment is stipulated in Article 28H paragraph 1 of the 1945 Constitution of the Republic of Indonesia, the logical consequence is that the state, as the duty bearer, must ensure that everyone truly fulfils, protects, and respects their right to a healthy environment. Good and healthy living includes the right to breathe clean air. Provisions for state accountability for the fulfilment of human rights are clearly written in Article 28I, paragraph 4, of the 1945 Constitution of the Republic of Indonesia in conjunction with Article 71 of Law Number 39 of 1999 concerning human rights.<sup>4</sup>

The poor air quality in Indonesia, especially in Jakarta and its surroundings, is actually not a new problem. This problem has been present to accompany the hustle and bustle of urban areas since several years ago, but recently it has returned to become a hot topic of conversation because of poor air quality due to air pollution, the majority of which comes from motorised vehicles, which is increasing and difficult to dam. The government has actually drawn up solutions to these

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<sup>3</sup> Michael Adiwijaya, "Peran Pemerintah, Industri Otomotif, dan Masyarakat dalam Meminimalisasi Tingkat Pencemaran Udara", makalah disampaikan dalam Seminar Nasional Lingkungan Hidup di Universitas Kristen Petra, 2010, hlm 1.

<sup>4</sup> Latuharhay, *Pemenuhan Atas Udara Bersih Digugat, Komnas HAM Urun Pendapat*, Komnas HAM Republik Indonesia, 21 Januari 2021, <https://www.komnasham.go.id/index.php/news/2021/1/21/1653/pemenuhan-atas-udara-bersih-digugat-komnas-ham-urun-pendapat.html>

environmental problems, starting with the transformation of electric vehicles, reforestation, and moving the capital city of IKN. But in reality, relocating IKN or making mass changes to reduce air pollution and poor air quality in Jakarta and its surroundings is certainly not as easy as turning the palm of your hand. So that in the end, the effort that can then be carried out by the government in the short or medium term is to control conventional polluting vehicles themselves, namely by enacting regulations for emission testing of motorised vehicles. Moreover, in the near future, the government will carry out emission test tickets in an effort to prevent air pollution from getting worse and worsening air quality in Jakarta and its surroundings.

Emission testing is an effort to examine the exhaust gas ducts of motorised vehicles. This emission test uses a special tool to assess the results of gas emissions contained in motorised vehicles. This test is carried out because motor vehicle exhaust contains hazardous substances, including carbon monoxide (CO), hydrocarbons (HC), nitrogen oxides (NOx), sulphur dioxide (SOx), and particulates PM10<sup>5</sup>. The purpose of this emission test is to check the feasibility of the performance of motorised vehicle engines and to reduce the amount of air pollution that is released from the exhaust of motorised vehicles. Emission tests can also reduce the occurrence of accidents because, with an emission test, it can be determined whether the performance of the engine of a motorised vehicle is good or not when used in activities.<sup>6</sup>

From the air quality problems caused by air pollution, one of which is from motorised vehicles, the government is then trying to overcome this problem by implementing emission test tickets in the near future, so questions arise in the author's mind. 1) How is the motor vehicle emission test used? 2) How to provide sanctions for vehicle owners who do not pass the emissions test. From these two questions, the author feels that the solution for implementing motor vehicle emissions tests is interesting to study and examine in more depth as part of the optimisation of emissions tests, which was launched several years earlier to reduce air pollution, especially recently with the title "Optimising the Use of Emissions Tests for Motorised Vehicles in Reducing Air Pollution."

## Method

This research is normative legal research, namely to initiate the implementation of motorised vehicle emission tests and efforts to impose sanctions on motorised vehicle drivers to reduce air pollution. The research used is a statutory approach and a conceptual approach. Types of legal materials consist of primary, secondary, and tertiary legal materials.

## Discussion

### 1. Use of Motorised Vehicle Emission Tests

Indonesia, as a constitutional state with the aim of achieving public welfare, requires a law that is used by the government to regulate society in order to create the

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<sup>5</sup> Siswantoro, Lagiyo, Siswiyanti, *Analisa Emisi Gas BUang Kendaraan Bermotor 4 Tak Berbahan Bakar Campuran Premium dengan Variasi Penambahan Zat Aditif*. Jurnal Panca Sakti Tegal, Volume 3 Nomor 1, April 2012.

<sup>6</sup> Elizabeth Michelle, Melvin Jusuf, Jenni Julian *Efektifitas Pelaksanaan Kebijakan Berdasarkan Pergub No. 66 Tahun 2020 Tentang Uji Emisi Kendaraan Bermotor di Jakarta*, Fakultas Hukum Tarumanegara, Jurnal Hukum, Vol. 12, No. 1, Hlm. 109

desired welfare. that all forms of administering government affairs must be based on applicable law (*legality of management*). Sociologically, law is an illustration of the value system believed by society as an institution in personal, social, national, and state life.<sup>7</sup> So laws are needed to create an orderly social and state order. To achieve the goals of the state, laws or regulations are needed to overcome or prevent problems from arising. Increasing air pollution has resulted in worsening air quality in Indonesia, especially in the capital city of Jakarta and its surroundings, one of which is caused by the increasing use of motorised vehicles, which is a problem that must be resolved immediately. Exhaust emissions are pollutants that pollute the air and are produced by vehicle exhaust gases. The exhaust gas referred to in this case is the residual gas from the combustion process that is discharged into the free air through the vehicle exhaust channel, so that vehicles that emit exhaust gas can be said to produce basic emissions that endanger air quality and the surrounding environment.<sup>8</sup> Motorised vehicles are considered a major problem in Jakarta and its surroundings. IQAir records that there will be 8,100 deaths in Jakarta due to air pollution in 2023. This air pollution problem also causes losses of up to US\$2.1 billion (RP 32.09 trillion).

In the context of the Welfare State Legal Theory, which emphasises that the state and its government must participate and ensure the implementation of people's welfare. Deteriorating air quality caused by vehicle pollution from motorised vehicle exhaust emissions certainly disrupts the welfare of the people in the affected residential areas. Injury to the right to a good and healthy environment, including the right to breathe good air, must be properly considered by the state and government as part of the obligation to provide for the welfare of its people in accordance with the legal theory of the welfare state initiated by Prof. Krenenburg. The existence of a motor vehicle emission test is a form of solution from the government to overcome the poor air quality in Indonesia, especially in Jakarta and its surroundings. Minister of Home Affairs Tito Karnavian issued the Minister of Home Affairs Instruction (Inmendagri) regarding air pollution control in the Greater Jakarta area, which has recently been in the public spotlight. Summarised in Minister of Home Affairs Regulation Number 2 of 2023, there are several main things that need to be done by Regional Heads, both the Governor of DKI Jakarta, the Governor of West Java, and the Governor of Banten, as well as mayors and regents throughout Jabodetabek. One of the Minister of Home Affairs' instructions regarding the tightening of emission tests for motorised vehicles.

Motor vehicle emissions testing is actually not new. The emission test policy has actually been implemented in the Jakarta area since 2020, in July, to be precise. The implementation of the emission test is based on DKI Jakarta Governor Regulation Number 66 of 2020 concerning Motor Vehicle Exhaust Emission Tests. Previously, there was Government Regulation No. 41 of 1999 concerning air pollution control. Article 31 of the law states that "handling air pollution from mobile sources includes monitoring exhaust emission thresholds, checking exhaust emissions for old and new types of vehicles, and monitoring ambient air quality on highways". Apart from that, there is also Government Regulation No. 41 of 1999

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<sup>7</sup> Zainal Arifin Hoesein, *Pembentukan Hukum dalam Perspektif Pembaruan Hukum*, Jurnal Rechts Vinding, Volume 1 Nomor 3, Desember 2012, Halm. 1.

<sup>8</sup> Siswanto, Lagiyono, Siswiyanti, *Op. Cit.*

concerning air pollution control. Articles 8 and 9 give authority to top regional leaders and heads of agencies to hunt down vehicle exhaust emissions.<sup>9</sup>

With the existence of these regulations, each local government can issue regulations regarding controlling vehicle exhaust emission limits while reducing the level of vehicle exhaust emissions in their respective regions. Motor vehicle emission tests will measure motor vehicle exhaust gas and detect the quality of the vehicle's engine. If it passes the emission test, vehicles can roam around the city of Jakarta without the imposition of sanctions. If you do not pass the emission test, you will be subject to a vehicle parking disincentive, namely the imposition of higher rates for parking at several points in the Jakarta area. The targets of the emission test in Jakarta are 2-wheeled and 4-wheeled oil-fueled vehicles operating on roads in the Jakarta area. The additional provisions for this emission test are:

1. applicable and mandatory for individual passenger cars and motorcycles with an age of more than 3 years.
2. Emission test results are valid for one year and can be renewed in the following year.
3. Emission test places are (i) the Emission Test Workshop, (ii) the Emission Test Kiosk, and (iii) the Emission Test Service Vehicles.

Broadly speaking, testing of motorised vehicle exhaust emissions is carried out by attaching a special gas detector to the exhaust section of the vehicle. In this case, the vehicle being tested must be in the on position, but with a record of not turning on any electronic devices in the vehicle such as radios, lights, or air conditioners. Testing vehicle exhaust emissions is carried out for at least 5 to 7 minutes. And when it's finished, the levels and substance content of vehicle fumes will be recorded. The substances detected are carbon monoxide, hydrocarbons, carbon dioxide, and nitrogen oxides. If the vehicle exhaust emission test has been completed, the local environmental service will issue a certificate of passing the emission test to vehicle owners who have carried out the test. The validity period of the emission test is one year after the document or proof of emission test results is issued.

The purpose of Governor Regulation Number 66 of 2020 is to create social order and maintain public welfare, especially in the context of maintaining a healthy and good environment. So that the purpose of the Pergub is in line with what Thomas Hobbes said: that the purpose of law is to create social order. Apart from that, the existence of the Inmendagri certainly strengthens the government's response to recent air quality problems, so that it becomes part of the government's contribution to the welfare of its people. The use of strict emission tests, according to the Minister of Home Affairs and Pergub No. 66/2020, is also part of the government's control over worsening air quality. In addition, the use of emission tests is also used as a decomposer for motorized vehicles in Jakarta and its surroundings which are indicated to be emitting excessive vehicle exhaust emissions so that they are acted upon, with the aim of reducing air pollution which is increasingly gripping, especially in the Jakarta and surrounding areas.

When peeled using the theory of the welfare state initiated by Prof. Krenenburg, then at least the application of emission tests must fulfill threemeanings of the theory of the welfare state.

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<sup>9</sup> Michael Adiwijaya, *Op. Cit.*, hlm 4.

- 1) As a state of well-being, (*well-being*) means social welfare as a condition of fulfilling material and non-material needs. Prosperous conditions occur when human life is safe and happy because basic needs are met. Which in this discussion focuses on health and when people get protection from the main risks that threaten their lives. In the context of this problem. The use of emission gas tests is part of the response of the state and government to maintain the welfare conditions of its people. So that the use of motorised vehicle gas emission tests exists for protection efforts from the government in the context of health and the right to a healthy and good environment from the main risks that threaten the lives of Indonesian people, especially Jakarta and its surroundings, from poor air quality due to air pollution.
- 2) As social services, social services generally cover five forms: social security, health services, education, housing, and personal social services. In the context of this discussion, the birth of the use of motor vehicle gas emission tests is a social service from the state and government to reduce air pollution, which has an impact on poor air quality, so that it becomes part of health services, especially in the scope of a healthy and good environment, including air quality. the good one.
- 3) As a planned state process or effort A process carried out by individuals, social institutions, communities, and government agencies to improve the quality of life through the provision of social services. The implementation of vehicle emission tests is part of the social services provided by the government to the general public to reduce air pollution, which results in poor air quality. This social service covers almost all elements of society, especially those in affected areas. People who use motorised vehicles as objects of social services in the form of vehicle emission tests, as well as several netted kiosks and workshops, are also involved in this social service to improve air quality, especially in polluted areas.

Based on the above, it can be concluded that the use of vehicle emission testing has become part of the presence of the state and government in the welfare of its people, so that it is in accordance with the welfare state theory initiated by Krenenburg. This is a form of the state's obligation to provide welfare for its people.

## **2. Imposition of Sanctions for Vehicle Owners**

The policy establishes criminal sanctions as part of a redemption effort. Crime cannot be separated from the goal country to protect the entire nation of Indonesia and to realise public welfare based on Pancasila and the Constitution of the Republic of 1945. Such a concept is an obligation: countries on the one hand protect and prosper society, and on the other hand, they also protect and prosper perpetrators. By departing from such a view, every legislative policy must also be an embodiment towards the achievement of goals it.<sup>10</sup>

Imposing enforcement or law enforcement on vehicles that do not carry out or do not pass the exhaust emission test for motorised vehicles to reduce air pollution is an absolute must. The enforcement of tests for exhaust emissions of motorised vehicles is none other than to reduce the dangers arising from air pollution or pollution caused by the increasing use of motorised vehicles.

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<sup>10</sup> E.Z. Leasa, "Penerapan Sanksi Pidana Dan Sanksi Tindakan (Double Track System) Dalam Kebijakan Legislas", *Jurnal Sasi*, Vol. 16 No. 4 Bulan Oktober-Desember 2010, hlm. 53

Types of vehicles that must meet the requirements for testing motor vehicle exhaust emissions refer to Article 47, paragraph 2, of Law Number 22 of 2009 concerning Road Traffic and Transportation. Types of motorised vehicles that must meet emission test requirements are motorcycles, passenger cars, freight cars, and special vehicles. For motor vehicles, passenger cars, bus cars, and freight cars. Grouped based on their function, namely individual motorised vehicles and public motorised vehicles.

The use of motorised vehicle emission tests as a control by the government against deteriorating air quality problems by breaking down vehicles that are indicated to emit excess emission gases so that they do not pass emission tests and vehicles that meet emission gas emission standards This aims to reduce air pollution, which has resulted in deteriorating air quality recently, especially in Jakarta and its surrounding areas. In its application, the police will check and ask for proof of passing the emissions test from the vehicle owner; this can be checked using an application called "e-test emissions" by entering the vehicle's police number.

The exhaust gas emission threshold requirements that must be met in detail are set out in DKI Jakarta Governor Regulation Number 31 of 2008 concerning Motor Vehicle Exhaust Emission Thresholds as follows:

1. Gasoline cars produced under 2007 must have CO<sub>2</sub> levels below 3.0% and HC levels below 700 ppm.
2. Gasoline cars manufactured after 2007 must have CO<sub>2</sub> levels below 1.5% and HC levels below 200 ppm.
3. Diesel cars produced under 2010, with vehicle weights under 3.5 tonnes, must have an opacity (lead) content of 50%.
4. Diesel cars manufactured over 2010, with vehicle weights below 3.5 tonnes, must have an opacity level of 40%.
5. Diesel cars produced under 2010, with vehicle weights over 3.5 tonnes, must have an opacity of 60%.
6. Diesel cars produced over 2010, with vehicle weights over 3.5 tonnes, must have 50% opacity.
7. Motor 2 stroke production is under 2010, CO is below 4.5%, and HC is 12,000 ppm.
8. Motor 4 stroke under production in 2010, maximum CO 5.5% and HC 2400 ppm
9. Motors above 2010, 2 stroke or 4 stroke, maximum CO 4.5%, and 2,000 ppm HC

If the vehicle that carries out the emission test does not comply with the threshold according to what has been set above, then the vehicle is declared not to have passed the emission test and is subject to sanctions. This also applies to vehicles that do not undergo an emission test that exceeds the specified limit.

Rules regarding the requirements for testing motor vehicle exhaust emissions are regulated in Article 48, paragraph 1, of Law Number 22 of 2009 concerning Road Traffic and Transportation. In Article 48, paragraph 1, it is stated that every motor vehicle operated on the road must meet technical and road-worthy requirements. The road-worthiness requirements are listed in Article 48, paragraph (3), one of which consists of letter A, namely exhaust emissions. The test for road-worthiness requirements is contained in Article 54 paragraph (3), which, among other things, consists of, in letter a, namely, motor vehicle exhaust emissions.

So based on the provisions of Law Number 22 of 2009 concerning Road Traffic and Transportation, every motorised vehicle is required to meet the requirements of



passing a motorised vehicle exhaust emission test. As for sanctions for two-wheeled motorized vehicles that do not meet the requirements for a motorized vehicle exhaust emission test, they may be subject to sanctions based on Article 285 paragraph (1) junto Article 48 paragraph (3) letter a with criminal sanctions in the form of imprisonment for a maximum of 1 (one) month or a maximum fine of Rp. 250,000,- (two hundred and fifty thousand rupiah).

The threat of sanctions that will be given is in the form of the highest parking rates and fines. This ticket penalty refers to Article 285 and Article 286 of Law Number 22 of 2009 concerning Road Traffic and Transportation, namely, the maximum emission test ticket amount is Rp. 250,000 for motorcyclists and 500,000 for car drivers. Imposing sanctions in the form of fines and the highest parking rates is none other than part of the government's way of reducing the number of motorised vehicles with exhaust emissions above the operating threshold.

### **Conclusion**

The problem of air pollution that has resulted in deteriorating air quality in Indonesia, especially in the DKI Jakarta area and its surroundings recently, is broadly caused by the density of transportation, which results in excessive emission of emission gases. The government then took preventive steps by issuing an instruction from the Ministry of Home Affairs, one of which mandated tightening emission tests as a form of reducing air pollution in accordance with the provisions of the applicable laws and regulations. The use of vehicle emission tests as part of the response of the state and government to participate in the welfare of the people in accordance with the legal theory of the welfare state initiated by Krenenburg. As a step to reduce the volume of motorised vehicle use that exceeds the exhaust gas threshold for motorised vehicles, which has implications for deteriorating air quality due to air pollution from exhaust emissions and is part of law enforcement that must be obeyed. The government stipulates fines and the highest parking rates for motorists who exceed the exhaust gas threshold for motorised vehicles, with a fine of Rp. 250,000 for motorcyclists and Rp. 500,000 for car drivers, in accordance with the provisions of Article 285 and Article 286 of Law Number 22 of 2009 concerning Road Traffic and Transportation.

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