



WWJMRD 2019; 5(6): 117-121
www.wwjmr.com
International Journal
Peer Reviewed Journal
Refereed Journal
Indexed Journal
Impact Factor MJIF: 4.25
E-ISSN: 2454-6615

Thi Hoa Nguyen
Ho Chi Minh city University of
Transport, Ho Chi Minh city,
Vietnam

Thi Minh Hao Dong
Ho Chi Minh city University of
Transport, Ho Chi Minh city,
Vietnam

Thi Nguyet Do
Ho Chi Minh city University of
Transport, Ho Chi Minh city,
Vietnam

Correspondence:
Thi Hoa Nguyen
Ho Chi Minh city University of
Transport, Ho Chi Minh city,
Vietnam

Pollution source from motorbikes and cars in big cities

Thi Hoa Nguyen, Thi Minh Hao Dong, Thi Nguyet Do

Abstract

A recent report on Vietnam's air quality 2016 published by the Vietnam Sustainable Energy Alliance shows that the overall picture of Hanoi's air is in an alarming state and the air quality index (AQI) and PM 2.5 dust concentration (dust with diameter of diameter $\leq 2.5\mu\text{m}$) both exceed national and international standards. One of the reasons for the decrease in air quality is due to the situation of old motorbikes emitting exhaust gas into the environment. Currently in big cities like Hanoi and Ho Chi Minh City, motorcycles account for 95% of vehicles and 56% of gasoline consumption, hydrocarbon emissions account for 94%, carbon monoxide (CO) accounts for 87% and nitrous oxide accounted for 57%. This shows that the air pollution caused by motor vehicles is increasing at an alarming rate.

Keywords: pollution, motorbike, old vehicles, traffic

1. Introduction

At present, there are about 40 million motorbikes in the country, among which there are cars operating from the 80s and 90s of the last century but still in circulation. Not only unsafe traffic, in the process of operating these "too expensive" cars also seriously affect the environment and people's health. These cars are due to outdated technology, so the ability to burn fuel does not go away, emit to the environment many times more than cars and most of the toxic emissions are hydrocarbons, greatly affecting human health. According to the scientists, in the exhaust gas of the vehicles with a lot of toxic components such as nitrous oxide, hydrocarbon, CO, when released into the environment, chemical reactions will create toxic gases. To poisoned or even suffocated people. Because burning fuel is the process of decomposing organic substances. This component is highly dependent on the engine quality. The older the engine, the more outdated technology is, the more fuel is burned thoroughly, the more toxic emissions are increased. During operation, "overburdened" vehicles emit into the environment a toxic emission 2-4 times higher than new vehicles, which are regularly maintained. Not only stopping at the problem of air pollution, the "too expensive" motorbikes also have the potential of unsafe traffic. The motorbikes are too old, many parts for ensuring traffic safety are no longer available, but still on the road. To reduce traffic accidents, representatives of road safety experts and the Vietnam Automobile Manufacturers Association (VAMM), it is necessary to issue regulations on technical inspection. Motorbike means to provide a basis for motorcycle usage. On the side of the State Administration, the National Traffic Safety Committee also agreed with vehicles with a use period of more than 15 years should be more stringent regulation of the year and at the same time have to study the department Study, consult the opinions of people who are using motorcycles to promulgate promises to bring traffic safely. At the announcement of the results of traffic safety research in 2015 of the National Traffic Safety Committee and VAMM coordinate on August 4, according to Associate Professor, Dr. Chu Cong Minh, University of Technology, Ho Chi Minh City National University, among all accidents recorded by the survey of motorcycle ownership and use in Ho Chi Minh City, was conducted within six months 9/2015 to February 2016) showed that the number of vehicles with a period of use from 10 to 15 years accounted for 44.5%. Given the number of analysis from the study, Minh cited, with vehicles used from 6-10 years, the proportion of vehicles encountering different levels of accidents is relatively stable, respectively 38%, 43% 36%, 40%. In contrast, vehicles used from 1 to 5 years, the proportion of vehicles experiencing accidents gradually increased

gradually, corresponding to 51%, 43%, 49%, 30%. Thus, new vehicles from 1-5 years can make the level of accidents less serious. Therefore, Mr. Minh proposed the policy of managing motorcycle use time and checking motorcycles periodically to increase safety factor when using the car. At present, the Government's regulation is that until January 1, 1818, all old motorbike used vehicles must be recovered. However, in reality, there are no documents regulating the useful life of motorcycles and mopeds. It is now necessary to issue a regulation on technical expertise of motor vehicles to provide a basis for the promulgation of regulations on motorcycle use. As a motorbike manufacturer and member of VAMM, Tseng Kuo Lung, Deputy General Director of SYM, said that the motorcycle market is still very active in the next few years. Vietnam is a dynamic motorcycle market because it is still the main means of people because of its usability and economy. According to Tseng Kuo Lung, manufacturers in VAMM are committed to constantly improve the technical quality, design new models in line with the market trend and propagate with the Agency about the waste product. According to the Decision No. 16/2015 / QD-TTg, manufacturers must organize the collection of disposed products that they have sold to the Vietnamese market and establish a point or system of waste disposal sites. Information from the Vietnam Register, the country has about 40 million motorbikes, this is the large number of cars, of which the car went into operation from the 80s and 90s of the previous century but still join the delivery. On the road. From 2015 onwards, there will be about 15,000 vehicles out of use each year, which should be eliminated, but the recall is very difficult because people are not self-conscious and often resell to remote customers. To recover capital. Old and worn-out motorcycles are essential to reduce environmental pollution and traffic accidents. In our country there are many old motorcycles, unsafe but still in circulation. However, it is not possible to equate these vehicles with other motorcycles at the same time, because of the different quality of the vehicles, more vehicles, fewer vehicles, and car owners. Maintain regular maintenance. Even vehicles are not in time to recover but due to poor maintenance, there is still potential danger of traffic safety, environmental pollution ... So, must base on the quality, safety not merely based on the expiry date.

Over time, the Ministry of Transportation has proposed to regulate the use of motorcycles for 8 years or 100,000 km. However, when it comes to collecting opinions, there are many objections, suggesting that this will affect the majority of the poor. Our country has a high rate of poor people, often used cars and many families use motorcycles as a means of earning a living every day. Most of the opinion that the need to recover vehicles such as motorcycles, car cars need to build legal basis is feasible to implement. Specifically, there must be an age limit. Based on that, the expired cars will be withdrawn, eliminated. Currently, only trucks, pickup trucks, passenger cars of 10 seats or more are subject to age restrictions. The Decision No. 16/2015 / QD-TTg refers to the choice of consumers to take the form of self-referral or transfer to collecting organizations for collection. Benefit according to manufacturer's policy. Consumers have the right to require the manufacturer to receive disposed products that they place on the market. Because the car, in addition to their own property many times as a souvenir of their own, so

many people have no interest or time to bring the car to submit or wait for other units to collect the car. On the other hand, with cars that are too old, cannot walk without a reasonable price support mechanism, the owner is ready to sell the car to the scrap shop to earn some profit. There is no basis for knowing the vehicle has a usage date. With the number up to the millions of motorcycles, which forces do the accreditation?. Motorbike bought and sold many times, not owner from province to province so how to test. If the lawfulness of the withdrawal does not get the support of the people, in addition, the arrangement of the depot is also not a simple problem. Thus, according to his management, Lien advocated limiting vehicles polluting the environment, not safe in traffic, threatening the lives of car owners and communities but parallel with that need to take People's opinions are new to practice. No matter expired electronic products or motorbikes are required to be withdrawn immediately. If the motorbikes are old but still work well, people still have the right to use, go to normal, no one forced them to hand over the product. There is no state agency to recall that product. The spirit of Decision 16 is to encourage businesses and producers to take the final responsibility for their products. That represents the corporate responsibility for society in protecting the environment. The reason is that so far there is no document that sets the date of use for motorcycles. In the immediate future, the registry is releasing a draft motor vehicle emission control regulation, which proposes to control vehicle quality through emission control. Currently in the city, about 2.5 million of the 6 million motorbikes in circulation have expired since 2000. Therefore, in the project related to the restriction of private vehicles into the city will consider reclaiming cars and motorbikes that are too old and still in daily use. Regarding the "too expensive" vehicles, some officials of the Hanoi Police Traffic Police Department said that due to legal problems, the authorities were unable to handle the "too expensive" vehicles. Currently, the Traffic Police can only handle cases of worn-out old cars pulling, carrying bulky, undocumented vehicles. With the situation that the air quality in the inner city is increasingly serious, affecting the health of the people, the policy of recovering used motorbikes is necessary. However, in addition to the need to develop the necessary legal provisions, there should also be specific regulations and actions to ensure the rights of people when having motorbikes subject to withdrawal and destruction.

2. Quantity of cars and motorbikes

With about 6 million motorbikes and half a million cars, the number of these vehicles exceeds the receiving capacity of the current transportation system. Not to mention the number of new vehicle registrations, each year increasing by about 10%. The Hanoi People's Council has just approved a master plan on some solutions to prevent traffic congestion. Including the ban on motorcycles in 2030. In the immediate future, will ban old motorcycles from circulating on the road. Many old motorbikes are still circulating freely on the street. The smoke and dust from these broken motorbikes has affected many people in other traffic. Currently, Hanoi has nearly 6 million motorbikes of all kinds in circulation. In particular, many vehicles were manufactured in the 1990s. At present, the air in Hanoi is polluted at an alarming rate. According to experts, every year in Vietnam the vehicle emits nearly 6 million tons of

CO₂. It is estimated that about 70% of pollutant emissions start from vehicles, including old cars. Increased air pollution has caused a sharp increase in respiratory diseases such as pneumonia, pharyngitis and acute bronchitis. At present, there are not any regulations on inspection of used vehicles for recovery. In the coming time, if there are no strict regulations on emissions management for old

vehicles, the people will still have to continue to face serious air pollution every time they go out. According to regulations, use of means expired years of traffic is a violation of the law, potential risk of traffic accident, It is dangerous for the lives of drivers and people involved in traffic, especially environmental pollution, seriously affect the transport business.



Fig. 1: Out-of-date vehicle in Vietnam

The rate of increase in personal vehicles in the city is increasingly high. As of 18.8, the whole city has nearly 7.89 million motor vehicles, including 734,806 cars and nearly 7.2 million motorbikes. Department of Transport assesses the situation of air pollution and noise due to transportation activities in the city over the past complicated developments. The increase in motor vehicles with poor emissions is affecting the health of the urban population. Facing the above situation, the Department of Transport is studying and proposing the City People's Committee to consider and report to the competent authorities about the need to control emissions for motorcycles and motorbikes participating in traffic in the area. The city aims to gradually manage and reduce air pollution caused by motor vehicle exhaust. In order to implement, the Department of Transport requested the Vietnam Motorcycle Manufacturers Association and Honda Vietnam Company to consider, coordinate and assist in developing a plan to survey the current situation of motorbike and motorcycle use. Traffic at a number of points (at maintenance service agents) in urban and suburban areas of units. Unify the contents of details, time, forms, survey forms when conducting the inspection to serve to propose solutions and policies to control emissions for this type of vehicle. Then, propose a budget to conduct the survey. However, for many years, people are not too difficult to be caught on the road many old cars are still

used to transport .Violations often happen again in HCMC. Annually, the Motor Vehicle Register will have statistics on old cars and old motorbikes in HCMC to inform the owner as well as the authorities to review. If the vehicle is still defective for use or swap, there will be many dangers because the condition, technical conditions of operation cannot be guaranteed. While, the owner of the vehicle unfortunately, refresh it into a new car to continue circulation on the road. At present, there are no documents regulating the use of motorcycles, motorcycles. The Transport Ministry has proposed to apply the term to motorcycles but met with opposition, mainly assuming that the poor will be affected, they will have to increase the cost of transportation and make a living. Currently, HCMC has a relatively small number of over-the-year automobiles, mostly passenger cars and passenger cars, and many bus routes are overdue. Have not changed the new car. Motorcycles have no regulations on the year so much traffic on the roads. Accordance to the Motor Vehicle Register, by 1 January 2017, Viet Nam will remove 23,075 cars over the expiry date, including more than 3,000 passenger cars and more than 20,000 trucks. Since the implementation of the current car-age regulation (2009), Viet Nam has removed 139,000 vehicles. The localities with the highest number of cars were eliminated were Ho Chi Minh City with about 5,448 cars. Previously, on May 22nd, 2015, the Prime Minister issued Decision

No.16/2015/QĐ-TTg which requires, from 01/01/2018 motorcycles, motorbikes and cars of all types, the expiry date will be revoked. Since there is no legal document regulating motorcycle and motorbike life, there are many vehicles that have been used for too long and are still worth traveling on the roads in the whole country in general and in HCMC in particular. At present, the environmental pollution in HCMC is getting worse. The main reason is the rapid population growth, poor planning of small roads ... and more specifically, the emissions of cars and motorbikes used by shippers. According to a report by the Registry in 2016, air pollution is becoming more and more severe in large cities with dusty suspended road levels in large cities exceeding the permitted multiple times. From the information above we also see that: HCMC's air pollution problem is more serious, there are many causes, but the main reason is that the means of traffic causing them to discharge the Noxious gas into the environment. Among the vehicles involved in the traffic, the highest polluting components were vehicles that were too old to be used by individuals and commercial organizations that were still used as vehicles. They emit toxic substances 2-3 times more than ordinary vehicles can be up to 3-4 times. In addition, the number of vehicles joining the traffic does not stop there it will continue to increase year by year, the amount of disposable waste will increasingly have a great impact on health, life of the people, affecting Transportation business and it is important not to build and keep a clean, beautiful city of Ho Chi Minh City. So we need to seriously obey the laws related to this issue to reduce environmental pollution and protect the public health and the importance of protecting ourselves.

Particularly, the exposure of traffic participants, especially motorcyclists, exceeded the permissible limit of 2 - 3 times ... In which, 70-90% of urban air pollution from traffic activities. In the two largest cities, Hanoi and Ho Chi Minh City, motorcycles account for 95% of the total volume, consuming only 56% of the gasoline but emitting 94% of the carbon monoxide (HC); 87% of carbon monoxide (CO); 57% of NOx (NOx) ... in total emissions of motor vehicles. Motorcycles are the main source of most pollutants. Ho Chi Minh City has 8 million motorcycles in circulation, of which a large number of vehicles have expired. Many people have a habit of using the medium for a long time without the care and repair. While many of the vehicles are too old and out of date, many people use their vehicles to transport goods. Trampolines, self-made cars or unmotivated motorcycles, both in the chassis and in the engine, are still circulated on the road. Most people involved in traffic when encountering such means often have to give way to avoid "rush to the body. When introducing the use of such old vehicles as first, it is not safe for the second user to be unsafe for other traffic participants, and it is important that the emissions of these vehicles are significantly higher than those of the other users. With facilities in use. And when I see these cars I feel quite uncomfortable because if you have to stop after vehicles such as this will be very annoying. According to traffic experts, 70% of the pollutant emissions originate from vehicles. When vehicles use fuel to operate, the engine will emit a large amount of toxic gases that pollute the environment and affect human health. These gases, especially carbon monoxide, which are released into the environment, react chemically to create a pyrogen-burning

gas. The HCs produce toxic, toxic gases that cause people to become poisoned. Choking. For diesel engines that cause dust when inhaled into humans, it is very toxic to the lungs and heart disease. The composition of this exhaust gas depends very much on the quality of the engine. The older the engine, the more backward the technology, the more the fuel burns down, the more toxic the exhaust is. During the operation, the means "overdue" emits toxic air emissions 2-4 times higher than the new vehicles, which are maintained periodically. On the other hand, if the vehicles are operating normally, the amount of gas emitted to the environment will be stabilized to the extent permitted, but when the vehicle operator regularly increases the gas, restart the machine or especially use Motorbikes are too old, motorbikes are too old, the amount of gas emitted into the environment will increase. That is the reason at the crossroads, intersections, air pollution levels are higher than the other areas.

The issue of environmental pollution and especially pollution from traffic vehicles and cars and motorbikes has been in the limelight for a long time. In order to handle and control the expired and expired motorized vehicles, the Prime Minister issued Directive 29/CT-TTg assigning specific responsibilities to the authority to strengthen inspection, Control and handle these objects; Requires the responsibility of heads of relevant agencies, units and localities to handle the expiration of the used vehicle in the area. However, up to now, the treatment of used vehicles in the area still faces many difficulties and problems. Although the Vietnam Register has built software alert and update the list of vehicles have expired but now HCM City and other provinces have not seriously carry out the review and statistics of the whole. The expired means of transport is under the direction of the Provincial People's Committee. According to the Transportation Vehicle Registration Center, it is impossible to thoroughly control the end-of-life vehicles by inspection because car owners usually do not take the vehicles for inspection since the end of their useful life. It is clear that the accrediting agency will collect the certificates of technical safety inspection and environmental protection of motorized road vehicles which have been issued if the vehicle is found dead. In particular, only important components such as chassis, chassis or machinery are tightly controlled, so many vehicle owners are free to dismantle and assemble other subassemblies on vehicles that are still in use. The registry is difficult to detect. In addition, many car owners exploit the limited capacity of human resources and vehicles to deliberately bring end-of-life vehicles to operate on small, remote, or internal routes. In some areas within the time frame the authorities do not arrange the patrol force ... making it difficult for the inspection. In particular, according to Decision 16/2015/QĐ-TTg dated 22-5-2015 of the Prime Minister, by 1-12018 motorcycles, motorbikes and automobiles of all kinds will expire. Retrieve. Therefore, at present, the functional force only registers the registration certificate, the car control plate of the end of the year, only the property owner has the right to decide the "fate" of the means after the settlement of the car the fine imposed on the result of the control of means of transport has not been tightened. In order to overcome the difficulties in handling and controlling expired vehicles and overdue inspection, local authorities should take on higher responsibilities in line with the direction of the Prime Minister. Covering, in

particular, will handle the responsibility of the head if the condition of the vehicle expires, the expiry of the accreditation for traffic accidents. Firstly, there should be more drastic instructions from the provincial people's committee to the district and commune level in reviewing and statistics of the end-of-life vehicles of the people in the area using the registration of off-shore control. From there, make a list of all vehicles which have expired registration period for control inside and outside the province and have the means owners being local people for functional forces to directly inspect and handle Units actively detect, handle in the course of duty, traffic guidance, patrol and control. Focusing on propaganda to communicate with functional forces directly inspecting and handling in the locality and local people in order to consciously realize that this is the danger of causing environmental pollution. According to the draft of the motorcycle exhaust gas inspection plan submitted to the Government by the Ministry of Transport at the end of September 2016, the emission control roadmap for motorbikes with engine capacity of 175 cm³ or higher, has been used for a long time. More than 5 years, circulation in special, type 1 and type 2 cities across the country will be officially applied on 1.7.2018. However, since the Government Office issued Official Letter No. 566 dated January 19, 2017 requesting the Ministry of Transport to continue studying the regulations on the application of emission standards and regulations on emission control for motorcycles, Motorcycles added to the Road Traffic Law, so far there is no specific decision on the time to implement the project. Too "impatient" before the environmental pollution caused by increasing emissions from motorbikes, in early May 2018, the Department of Transport of Ho Chi Minh City issued a written proposal to the Ministry of Transport soon to submit to the Government for promulgation of regulations on check emissions for motorcycles in circulation. In case the above regulations have not been issued for nationwide application, the City expects the Ministry to guide procedures to be able to pilot. Since then, although the city has repeatedly sent urging documents, due to the need to wait for amendments and supplements to the Road Traffic Law, this project has so far been waiting on paper. Meanwhile, according to the latest report of the Department of Natural Resources and Environment of Ho Chi Minh City, transportation activities are the largest source of pollution in Ho Chi Minh City. The higher the area the amount of vehicles, the more frequent traffic jams the more serious the environmental pollution and air pollution. Called old motorcycles, because there are almost no signs to identify what kind of vehicle? There are cars with only rusty iron frames, the head is empty with messy wires, no horns, no lights, turn signals, no mirrors. Even many cars do not have a vehicle registration, no number plates, no exhaust ... but still circulate daily on the road. The old used cars are old Honda cars manufactured from the 70s and 80s of the last century such as Cub and Dream cars; Angel cars of SYM firm produced before 2000; Wave vehicles manufactured by China ... With the advantage of being compact, low fuel consumption, these vehicles were quickly chosen by the people, with cheap prices of only 1-2 million VND / vehicle. After that, most of the cars were steam engine rebuilt to increase capacity or install additional freight, shock absorbers. The main purpose of the user is to carry a lot of goods, increase the load. Using

an old car that does not guarantee safety conditions, carrying bulky, heavy goods, unable to control the speed ... so the risk of causing a traffic accident is very high. Worth mentioning, many homeowners also build their own motorbikes from old motorcycles into three-wheelers. Observations in inner-city districts show that the number of people using this type of vehicle is less and mainly appears in the time frame of 3-5am; 11:30 - 13:30 pm and from late afternoon to night. This is the time when people bring goods into markets in Hanoi's inner city such as gas, pork, fish, purified water, wooden furniture, soft drinks, scrap, waste water for animal husbandry. cattle, construction materials ... As for belt routes such as Nguyen Xien, Nguyen Trai, collector roads of Thang Long Boulevard, Pham Van Dong, Nguyen Van Cu, Giai Phong, De La Thanh, or some national highways such as 1A, 32, 6, 21B ... the gateway of the Capital to connect with suburban districts, the density of old motorcycles is more circulated. Not only carrying the oversized, overloaded, the owner of the used car is also carrying more people sitting squatting on the bags, very dangerous.

3. Conclusion

When asked, many people have the same opinion that the recovery of old motorbikes for disposal according to regulations is appropriate and necessary in the current period. However, to determine what old car is, there is no specific regulation, mainly based on the feeling when evaluating the vehicle form. Not only do traffic unsafe, old cars are also a serious source of air pollution. In fact, the older the engine, the more backward the technology is, the more the combustion of fuel is reduced, the more toxic emissions are thus. Typically, after People's Committee is correct and urgent, because the situation of air pollution in Hanoi has reached an alarming level, including pollution sources from exhaust fumes of cars and motorcycles, especially is a broken motorbike. Therefore, the number of motorcycles is considered to be old, low value or not safe when traveling. For vehicles that do not meet the manufacturer's standards but are still on the road, the Team will only punish faults as prescribed, but the vehicle cannot be confiscated because there has been no written regulation so far. However, the difficulty in dealing with motorbikes is not yet registered, while the majority of "miserable" people are poor, using old motorbikes for a living.

References

1. <http://www.vietnamplus.vn/de-xuat-quy-dinh-nien-han-su-dung-doi-voi-xe-may-het-dat/399499.vnp>
2. <http://anninhthudo.vn/oto-xe-may/xe-may-cung-phai-co-han-su-dung/697026.antd>
3. <http://tuoitre.vn/tich-thu-xe-het-dat-ho-tro-ra-sao-1271657.htm>
4. <http://thanhnien.vn/doi-song/xe-may-qua-dat-nam-ngoai-kiem-soat-794167.html>
5. <http://www.tinmoi.vn/lienquan/o-to-xe-may-het-han-su-dung-se-bi-thu-hoi-1275735.html>
6. <http://autodaily.vn/2015/05/thu-hoi-oto-xe-may-het-han-su-dung-tu-nam-2018/>