

The air pollution caused by old cars and motorbikes in Vietnam

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Abstract: According to a report of the Registry in 2016, air pollution is becoming more and more serious in large cities with dust suspended in roads in large cities that exceed the permitted standards many times. One is the motorcycle life expectancy, or 6-month or 1-year motorcycle test, with vehicles that do not meet safety and emissions standards, high environmental fees. An old car that costs several million and has a high environmental fee of 1-2 million per car will not dare to use anymore. Particularly, the exposure of traffic participants, especially motorcyclists, exceeds 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 petrol but emitting 94% of carbon monoxide (HC); 87% of carbon monoxide (CO); 57% nitrogen oxide (NOx) ... in total emissions of motor vehicles. Motorcycles are the main source of most pollutants.

Keywords: pollution, motorbike, old vehicles, traffic

1. Introduction

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, 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 / QĐ-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.

2. Old cars and old motorbikes in Ho Chi Minh city

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.



Figure 1. Old vehicle in Vietnam

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. The expiry date of these vehicles is specified as follows:

2.1. Freight cars and passenger car

- Not more than 25 years for Freight cars.
- Not more than 20 years for passenger cars.
- Not more than 17 years for automobiles converted from other kinds of vehicles into passenger cars before January 1, 2002.(Pursuant to Article 4 of Decree No. 95/2009 / ND-CP). This Decree applies to all organizations and personal using cars on road, except for:
Automobiles of the army and police for national defense and security purposes;
Passenger cars for up to 9 seats (including the driver);
Special-use automobiles (automobiles with structures and equipment to perform a special function or function), trailers and semi-trailers;
Where a treaty to which the Socialist Republic of Vietnam is a contracting party contains provisions different from those of this Decree, the provisions of such international treaty shall prevail.

2.2. Cars, motorbikes

At present, there are no documents regulating the use of motorcycles, motorbikes. 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.



Figure 2. Pollution from old vehicle in Vietnam

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/QD-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.



Figure 3. Old motorbike in Vietnam

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. 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 NO_x (NO_x) ... 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.

Master Do Khac Son - Lecturer in the Department of Automotive Engineering - Hanoi University of Transport explained: Fuel that does not produce good emissions, In the exhaust gas contains many toxic components such as NO_x, carbon hydrocarbons, While there. 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.

3. Solution

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, motorcycles 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. And traffic accidents, thereby actively not buying, selling and using long-distance means of transport.

4. Conclusion

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.

References

- [1] <http://antoangiaothong.gov.vn/co-quan-thanh-vien/tu-1-8-2018-thu-hoi-xe-mo-to-xe-gan-may-quan-nien-han-su-dung-diep-vu-bat-kha-thi-206656.html>
- [2] <http://www.vietnamplus.vn/de-xuat-quy-dinh-nien-han-su-dung-doi-voi-xe-may-het-dat/399499.vnp>
- [3] <http://anninhthudo.vn/oto-xe-may/xe-may-cung-phai-co-han-su-dung/697026.antd>
- [4] <http://tuoitre.vn/tich-thu-xe-het-dat-ho-tro-ra-sao-1271657.htm>
- [5] <http://thanhvien.vn/doi-song/xe-may-qua-dat-nam-ngoai-kiem-soat-794167.html>
- [6] <http://www.tinmoi.vn/lienquan/o-to-xe-may-het-han-su-dung-se-bi-thu-hoi-1275735.html>
- [7] <http://vietnamnet.vn/vn/chuyen-trang/oto-xemay/cach-tinh-nien-ha-n-su-du-ng-doi-voi-cac-loai-o-to-358262.html>
- [8] <http://autodaily.vn/2015/05/thu-hoi-oto-xe-may-het-han-su-dung-tu-nam-2018/>