

2 Content of Conference

Chairperson

I would now like to officially open the Asian-Pacific City Summit Working Level Conference on Transportation Issues. My name is Toru Tsuruta and I am Chief of the International Planning Section of the International Relations Department of the Fukuoka City Government General Affairs Bureau. Firstly, we will hear some opening remarks from the Mayor of Fukuoka City, Mr. Keiichi Kuwahara.

Opening Remarks

Mr. Keiichi Kuwahara
Mayor of Fukuoka City

Mr. Keiichi Kuwahara (FUKUOKA)

Good morning. On the occasion of the convening of the Asian-Pacific City Summit Working Level Conference on Transportation Issues I would like to make some brief remarks. As you are aware, while the Asia Pacific region is experiencing remarkable economic growth, various difficulties associated with the concentration of population in cities are becoming more serious.



All manner of problems have arisen including those associated with transportation, housing and the environment. With the aim of creating a network of mutual cooperation in order to solve such problems, in September last year I held the Asian-Pacific City Summit under the theme "Harmony between Urban Development and the Living Environment" and it was attended by leaders of 21 cities from 11 countries and regions. At the summit, mutual understanding of each cities conditions and policies was deepened and at the same time the necessity of reciprocal cooperation was reconfirmed. Also, it was decided the summit should be held every other year and in the interim this working level meeting should also be held. The working level meeting is supplementary to the objective of the summit. It is held as a forum where administrators from each city can further augment and develop mutual study, exchange and cooperation in order to solve their cities' problems.

Therefore, over the next two days I hope that you, the participants will exchange a lot of opinions and information and that you will get something from the meeting and that it will contribute to sound city management. Furthermore, I sincerely hope that you will take this opportunity to strengthen the network between your cities. Finally, I would like to close my remarks by extending my best wishes for the

health and endeavor of all those in attendance. Thank you very much.

Chairperson

Thank you very much. Before we begin the meeting I would like to select a chairman.

I will take the liberty of choosing Mr. Yoshiya Yamashita who is the Deputy Executive Director of the Urban Planning and Development Bureau of the Fukuoka City Government.

I will now hand proceedings over to Mr. Yoshiya Yamashita. Thank you Mr. Yamashita.



Chairman

Good morning. My name is Yoshiya Yamashita and I have been selected to perform the duties of chairman.

Today, as those united by the common goal of solving transport problems in your respective cities, I hope that you will engage in the rigorous exchange of opinion. At today's meeting I am looking forward to participating with you in a harmonious atmosphere and I hope the meeting will be very fruitful. I ask for your cooperation in achieving this. Well then, I would now like to introduce the participants from each city. Unfortunately due to time constraints I will have to take the liberty of reading each participant's name for them. Please stand when I read your name. The participant list has been distributed to you so please refer to it. As there are 20 cities participating I will read the participants names in alphabetical order.

... Introduction of Participating Cities ...

Presentation ||||||||||||||||||

Mr. Zhang De Ming

Vice Director, Public Security Bureau, Guangzhou City

Chairman

Firstly, we will have a presentation from Mr. Zhang of Guangzhou, a city which is achieving remarkable development. Thank you.

Mr. Zhang De Ming (GUANGZHOU)

Ladies and gentlemen, my dear colleagues. My name is Zhang De Ming. I am Vice Director of the Guangzhou Public Security Bureau of the People's Republic of China. I am in charge of traffic management.



It is a great pleasure for me to take this opportunity to brief you on the traffic management of Guangzhou City in accordance with the theme of this conference. Guangzhou has a very long history. It is now the capital of Guangzhou Province, China. Please look at this slide. This is Guangzhou City. As one of the 14 coastal "open cities," it plays an important role as a center of foreign economic and cultural exchange in South China. This is Guangzhou City and this is Pearl River (Zhujiang). Today, I would like to talk about the traffic management of Guangzhou City touching on three main points. As the slide shows, the first one is the road condition and the population, the second one is the problems concerning the traffic management, and the last one is the measures we have been taking recently and their effects. I would like to touch upon these three points.

Guangzhou consists of five administrative divisions, one of which is a municipality, and four of which are county-level cities. The total area is 7,334.4 square kilometers, and the population is 6,338,000. The municipality is further divided into eight administrative districts and one economic and technological development zone, with the total area of 1,443 square kilometers. Right now, the new urban construction district occupies 216 square kilometers. As of the end of 1994, the population of the municipality of Guangzhou City is 3,774,000, the city streets extend for 1,404 kilometers, the highways extend for 884.1 kilometers, the number of motorized vehicles is 419,400 (including 233,700 motorcycles), and there are 2,220,000 bicycles, and over 10,000 three-wheeled rickshaws.

The Guangzhou traffic police detachment, which is under the control of the Guangzhou Public Security Bureau, is an administrative organ that is responsible for the traffic management in Guangzhou City. I would now like to give you a brief outline of traffic management conditions in Guangzhou City.

Since China instituted the reform and market opening policies in 1979, road traffic in Guangzhou City has increased dramatically in the wake of rapid economic growth. In particular, the number of motorized vehicles, i.e., automobiles and motorcycles, has increased remarkably. In 1979, there were only 31,000 motorized vehicles in Guangzhou, but by 1994, this number grew to 419,300, with the average annual growth rate of 18 percent during those 15 years. The number of vehicles continues to skyrocket, with 453,000 vehicles registered in Guangzhou as of the end of June, 1995. For various reasons, there are many unfavorable elements in Guangzhou City's road traffic system. Slide please. This shows the four major problems which Guangzhou City now faces.

The first problem is that the roads and the attached facilities don't keep up with the increase of vehicles. There are now 15 times more vehicles, and 2.4 times more non-motorized vehicles than there were in 1979, but the length of roads has increased

by only 3.5 times compared with 15 years ago.. Moreover, most of this increase of the road length only accompanies the expansion of the new urban construction district. In the old areas of the city, the streets are dense and narrow, there are many bottleneck roads and irregular intersections. And, the traffic condition of these areas has not improved. Because the improvement of roads has not caught up with the rapid increase of the vehicles, traffic congestion is terrible. This slide shows one of the congested roads. This also shows traffic congestion. As I mentioned before, problems, such as many irregular road intersections, have not visibly improved. When the current total area of roads is divided by the number of motorized vehicles, the area per one vehicle is less than 30 square meters. That is, the road area per one automobile does not reach 30 square meters. The number of parking lots being constructed is also inadequate. As of December of last year, there were only nine public parking ramps with more than two floors, with the grand total of only 5,458 parking spaces. I cannot but say this number of parking spaces is too small for more than 400,000 motorized vehicles.

The second problem in Guangzhou City's traffic situation is the imbalance between the type of vehicles and how they are used. At present, three kinds of vehicles are rather popular: bicycles are the most popular, and there are 2,220,000 bicycles. As you can see, this slide shows the road congested with commuters on bicycles. Bicycles are prevalently used for moving. The average number of bicycles per person is 1.7. The second are motorcycles. The number of motorcycles is 233,700, accounting for 56 percent of all motorized vehicles. As you can see, people also use motorcycles rather extensively. The third are small trucks with loading capacity of less than 2 tons. There are as many as 58,200 such trucks, making up 60 percent of the total number of trucks. If we compare the three kinds of vehicles, as you see, 30 percent of the people use bicycles, and this is a relatively high percentage. Despite the fact that between 1984 and 1994 the population of the municipality of Guangzhou City increased by half million people, and one million people moved to the city from other areas, the number of people using public transportation such as buses has decreased.

The third problem is that people who use the road traffic are not sufficiently aware of traffic regulations and traffic safety needs to keep up with the development of the traffic. A lot of drivers do not pay much attention to the indispensable conditions for a smooth traffic flow, the occurrence of traffic accidents, and the negative factors such as pollution by motorized vehicles. And they don't realize the importance of observing traffic regulations or maintaining traffic order. These people tend to act in traffic only from their own convenience, so that violations of traffic regulations such as illegal parking are seen at all the parts of the city.

This slide gives a vivid account of how insufficiently the citizens observe traffic regulations. But then, if some people in charge of traffic management happen to be there, the situation would be different. In such a case, the traffic regulations are relatively observed.

The last problem is the failure of traffic control technology and managerial methods in keeping up with the demand created by the growing traffic. We must admit that the level of the technology of Guangzhou's traffic management is lagging far behind, when compared to the rapid expansion of the road traffic. Of the 600 intersections in the urban district, only 130 of them are controlled by signals, and only 40 of those are being controlled by the Traffic Control System. In other words, the total area under direct traffic control is less than 5.5 square kilometers. Traffic at most busy intersections is still controlled by the traffic signals which give signals in independently fixed cycles and by the traffic police. There is an average of 50 accidents per day. Investigations of these accidents still employ a tape to measure length and location, and pictures of the scene of an accident are drawn by hand. At present, documents of over 600,000 motor vehicles and 800,000 drivers are still manually handled. Judgements concerning traffic violations are made by traffic enforcement officers, who must rely on their visual and auditory senses only. Modern equipments such as alcohol detectors, radar speed detectors, exhaust fumes measuring devices, and television monitors are only in use at very limited locations. The radio communication system currently being used suffers from interference brought about by many different causes.

Being influenced by the above four problems, Guangzhou City's traffic situation is still very poor, as is detailed by the following points. First of all, traffic accidents occur frequently. For example, in 1994, there was a total of 4,765 traffic accidents, in which 546 people were killed and another 1,285 people were injured. The direct economic losses incurred amounted to 31,896,000 yuan. Moreover, the number of people killed in traffic accidents has increased year by year.

The second point is the severity of traffic jams. There are currently 75 intersections in Guangzhou City through which more than 50,000 motorized vehicles pass in the 12 daytime hours. On the main trunk roads, rush hour begins at 7 a.m. and ends at 12 o'clock midnight, with essentially no difference in the density of the traffic during that period. Traffic jams are not limited to specific intersections and roadways, but occur throughout the entire area. The average speed of vehicles within the municipality is only 18 kilometers per hour. The third point is the very serious pollution caused by motorized vehicle exhaust fumes. At present, the amount of auto exhaust fumes exceeds the amount of exhaust gas emission by industry, making it the main source of air pollution in Guangzhou City.

In order to improve the serious condition of Guangzhou City's roadway traffic, the Guangzhou Roadway Traffic Management Department has been actively involved in presenting suggestions for road construction and traffic planning to the municipal government. At the same time, the Department has been using every administrative method available to strengthen road traffic management within the limits of the existing conditions and equipments. It has made some progress in this endeavor. It can now virtually guarantee that traffic moves, albeit slowly, even during rush hours. Furthermore, we have prevented pollution by auto exhaust from worsening, even as the number of vehicles continues to increase rapidly. We have put forward some measures to improve the traffic environment and stimulate road construction. Slide please. This shows the measures we have been taking recently and their effects. The first measure is to speed up the construction of urban roads and public traffic facilities. The municipal government attaches great importance to the construction of roads and public traffic facilities. After carefully considering the opinions of Public Security, Urban Construction, Traffic, Transportation, and other relevant departments, as well as the public, the municipal government has invested a large sum of money and proceeded with a series of systematic construction of roads and public facilities. The first project was constructing an inner beltway in the city. This red line shows the beltway. This inner beltway was constructed in the center of Guangzhou City, so that vehicles that used to pass through on their way to somewhere else can reach their destinations without passing through the city. As a result, congestion in the municipality was reduced. This red dot shows the running direction of the inner beltway.

The second project was constructing large passenger and cargo transfer terminals at the intersection of urban and rural areas. The flow of travelers and cargo then is dispersed between the terminals, lessening the pressure on the municipality. The third project was expanding the municipality and the new urban zone. As the streets in the new urban zone are widened and facilities for living are completed, residents of the old urban district are attracted to the new one. And by redirecting the flow of traffic from the old urban area to the new urban district, traffic was dispersed.

The fourth project was redeveloping the old urban district, and reforming the existing roads, as well as replacing the current intersections on the main trunk lines with cloverleaf interchanges. Slide please. This is the newly built cloverleaf interchange, named Ouzhuang Cloverleaf Interchange. Next slide please. This is another cloverleaf interchange, built at the intersection of the roads to the airport, so we call it Airport Cloverleaf Interchange. The municipal government reformed it.

Among the newly improved trunk lines is the highway running in the suburb of

Guangzhou City. The speed of vehicles running on the highway is high, so anti-collision fences and center-railings in the middle of two-way roads were installed in order to help prevent accidents. On October 1 in 1995, the trunk line with broader roads just opened, which runs through north and south of Guangzhou City. The width of the road was expanded from 16 meters to 40 meters. This road, called Jie Fang Road, which runs through north and south, just opened recently. And we also improved Dong Feng Road, running through east and west. This road is also a trunk line with the width of 40 meters. All intersections along these two roads were replaced with cloverleaf interchanges. That is, automobiles can run through without crossing any intersections and stopping at any signals. They can run with high speed, so the traffic in the municipality of Guangzhou City is much smoother. On these two Dong Feng and Jie Fang Roads, automobiles can run at 40 kilometers per hour.

I have just explained the first measure to improve roads and public facilities under the guidance of the municipal government. The second measure we have been taking is to implement policies that regulate and limit the increase of vehicles. First, we limited the number of private-use motorcycles. The number used to increase by 40,000 a year. Since 1993, by limiting the number of license plates issued, we have held the increase to under 6,000 units per year.

Secondly, we also apply some restrictions on bicycle use in order to make bicycle use less attractive, and encourage people who now use bicycles to switch to public transportation. Such measures include, for example, narrowing bicycle lanes, establishing a time window in which bicycle use is prohibited in certain areas, and gradually repealing the current policy which gives preferential treatment to bicycle users. We also encourage the advancement of public transportation. This entails lowering the tax levy on buses, using part of the national budget to purchase buses, and loosening the driving rules for buses. For example, allowing buses to travel down one-way streets in the opposite direction and creating lanes exclusively for bus use in certain areas. At the same time, by introducing foreign capital for joint ventures that run public transportation operations, we promote further development of public transportation industry through various means. On the other hand, we give subsidies to bus companies and discount on commuter passes for the people using public transportation every day to encourage citizens to use public transportation system. These are the steps in the second measure. In short, confronting the increase in the number of vehicles, we limit the number of vehicles in each kind as are necessary.

The third measure is to limit the total number of moving motorized vehicles. First, we regulate the passage of trucks into the urban district. The use of trucks

registered in the city is only permitted on odd- or even-numbered days, depending on the last digit of the truck's licence plate. In this area, trucks coming from outside of Guangzhou City are prohibited from entering the city during the daytime. And even trucks inside Guangzhou City are only allowed to run on odd- or even-numbered days. If the last digit of the truck's licence plate is even, it can run on even-numbered days, or on odd-numbered days if odd. This aims at reducing the number of trucks which run during the daytime. In case of a special situation when it is necessary for a truck to come in the city, the truck driver must apply to the Public Security Bureau's Traffic Management Department for a temporary entry permit. Trucks with shipping containers are also forbidden from entering the city between 7 a.m. and 7 p.m. In addition, all trucks are forbidden from entering a certain downtown area, with its narrow and busy streets.

Secondly we limit the quantity of the traffic, that is, we restrict motorcycles coming from outside of Guangzhou City. With the exception of holidays and weekends, motorcycles from outside the city are prohibited from entering the municipality of Guangzhou City between 7 a.m. and 7 p.m. It is this area which I am showing now. In short, in the area where trucks are prohibited from entering, motorcycles from outside the city are also prohibited.

And we also adopt the staggered office-starting hours for nearly one million working people in Guangzhou, such as 7 o'clock, 7:30, 8, and 8:30. With this system, traffic is split up systematically and the number of the moving vehicles are controlled. As the last measure, the fourth one, we instituted strict control over traffic on certain roads. In the old urban area, where the network of streets is extremely dense, and the streets themselves are narrow, 82 roadways and streets have been switched into one-way streets.

Slide please. This is the trunk road running from east and west. We adjust and control the traffic flowing on this Dong Feng Road (8.3 kilometers long) in the urban district. We installed center-railings to prevent all north-south traffic from crossing Dong Feng Road. These are for Dong Feng Road. Right now, there are no signals on Jie Fang Road and the even-level intersections have been replaced with cloverleaf interchanges. In addition, bicycle traffic is forbidden between 8:30 a.m. and 5 p.m. These measures make Jie Fang Road a high-speed north-south roadway exclusively for automobile use. We are currently planning on rebuilding Jie Fang Road.

The next is to prohibit left turns from intersections on heavily traveled roadways. (Traffic in China runs on the right-hand lane. Only left turns are prohibited, not right turns.) This lessens the traffic congestion at intersections.

And we also strengthen control of traffic violations. We enact strict punishment

for speeding, crossing the center line to pass vehicles, and other traffic violations. In addition, we institute towing of cars that are parked in improper places. We also increase public awareness campaigns relating to traffic regulations in order to enhance the public's respect for traffic regulations and raise travelers' traffic safety awareness.

The four measures outlined above succeeded to some extent in actual practice. In order to make Guangzhou's roadways better able to contribute to economic development within the limitations of current conditions, we are currently taking the following series of effective measures.

First, we plan to speed up the construction of the east-west subway line (Line No.1) so that it will be completed and operational by the end of 1998.

Second is accelerating new road construction and reconstruction of the old road network at the same time, to improve Guangzhou's road system so that it meets the demands of the many vehicles in the city.

Third, we will improve the parking situation by promoting construction projects that will increase the number of parking lots in tandem with the construction of residential areas, commercial buildings, and offices.

Fourth, we bring the increase in vehicles under control by means of measures that make vehicles less economic, such as instituting a consumption tax on vehicles, a road repair and maintenance tax, parking fees, licence plate regulation fees, and a tax on vehicle ownership.

Fifth, we plan to restrict and reduce private ownership of vehicles and expand the public transportation system at the same time.

Sixth is to take legal measures to bring traffic into order. For example, strengthening the structure of the traffic police, enacting new laws to regulate traffic, and advancing the technology of traffic control devices.

That concludes my brief introduction to the traffic situation in Guangzhou City, China, and the measures that we are taking to make improvements. Ladies and gentlemen, thank you for your kind attention. (Applause)

Discussion |||||

Chairman

Thank you very much, Mr. Zhang. We have heard about the situation in Guangzhou City concerning its traffic conditions and various other issues in the city, and the various measures the city will take in the future. Thank you for your presentation. Your presentation with concrete examples was very helpful. There will be an opening of the subway line number 1 and the improvement of the main roads of Dong Feng

Road and Jie Fang Road, and also solution for parking problems and limiting of the number of vehicles. We do hope that these measures will be successful and thus contribute to the further development of the city.

Does anyone have any comments, further questions or other requests regarding this presentation?

Mr. Hong Wan-Shik (PUSAN)

It is a great pleasure for me to see you all. My name is Hong Wan-Shik, Director of the Transportation Planning Division of Pusan City. We agree on many points with Guangzhou City, since the examples of Guangzhou City are very similar to those of Pusan City. For that reason, I was very much interested. Concerning the restriction with the last digit of the truck's license plate, I would appreciate it if you would elaborate on this issue.

Mr. Zhang De Ming (GUANGZHOU)

I will now answer the question from Pusan, regarding the last digit of the license plate. In order to reduce the number of trucks coming to the center of the city in the daytime, we regulate the traffic by truck's license plate. The center of the city is the district that I have shown you in the slide. There are two restrictions by the license plate. One is for large and small-size trucks registered in the city. There are certain restrictions depending on the last digit, whether it's odd numbered or even numbered. If it's odd numbered, you can operate on odd days. If it's even numbered, you can operate on even days. And you cannot change days between odd days and even days. And the other is for the trucks coming from outside Guangzhou City in the day time. These trucks are prohibited from coming into the center of the city, from 7 a.m. to 7 p.m. All of the trucks coming from outside the city are only permitted coming in during the night, but there are some special situations where it's necessary for trucks to come in. In that case, the truck driver must apply to the Public Security Bureau's Traffic Management Department for a temporary entry permit.

As for the restriction of the issuance of license plates for motorcycles, private-use motorcycles in Guangzhou City, right now, is greatly increasing in number, and affecting traffic conditions in the city. By 1993, an increase of more than 40,000 was seen each year. Therefore, our city decided to take a measure to restrict the growth of the number of private-use motorcycles, by limiting the issuance of license plates to 500 units per month. That is the restriction applied. In other words, 6,000 units per year. This became effective in October 1993. Thank you.

Mr. Hong Wan-Shik (PUSAN)

Thank you very much.

Mr. Shigetaka Nose (FUKUOKA)

My name is Nose, Chief of the Transportation Planning Section of Fukuoka City. I have just heard a very interesting presentation. Probably I heard it wrong. I would like to ask about the size of the district, which you have shown us in the slide, where you have regulations to restrict vehicles from entering by the last digit of the license plate. Also I would like to know about the function of the district, whether it is a business district or a commercial district, or just an old urban district? I would like to know this because naturally there must be some cases, in which some vehicles have to enter the district. And also, it will be necessary for those cars to come into the center of the city in order to maintain the function of the city. By applying this restriction across the board, it might have some adverse impact, I'm afraid. So, I would appreciate it if you would touch upon this respect.

Mr. Zhang De Ming (GUANGZHOU)

I would like to answer the questions from Fukuoka City. We limit the number of trucks by categorizing them according to the last digit number, whether it is even numbered or odd numbered. Cars belonging to other cities are not permitted to enter the center of the city in the daytime, whose area is about 60 square kilometers. The center of the city covers 216 square kilometers. In other words, one third is the prohibited area, into which cars coming to Guangzhou City are not permitted to enter.

This restriction does not have so much adverse impact. Companies, offices and groups usually own several numbers of trucks, and in issuing license plates, we try to divide them into even and odd numbers. So, there are no bad effects. And also you can enter the city at night. Special permits are issued to the trucks which transport daily goods necessary for citizens, such as vegetables, fish, cooking oil and other foodstuffs. We have been using this method for three years, and there has been no serious impact. Instead, we are having a very good impact solving the traffic jams in the city. Thank you.

Mr. Shigetaka Nose (FUKUOKA)

Thank you very much.

Mr. Hisao Shimooka (OITA)

My name is Shimooka, Director of the City Planning Department of Oita City.

Thank you very much for your very interesting presentation. Among our traffic problems, parking for cars and bicycles is the issue of great concern. Of course, Guangzhou City and our city are different in size. So it is difficult to compare them. However, when we consider so many bicycles, motorized cars, and manners in which the traffic regulations are observed, haven't illegal parking and traffic violations become big problems? Since so many bicycles are used, people might have some difficulty in finding places to park bicycles. Are there any regulations or any obligations to make a parking space for bicycles? In Japan, builders have to bear certain cost to provide a space for parking cars or bicycles. With so many bicycles being used in the city, how are you dealing with parking problems? I would appreciate it if you would elaborate on this matter.

Mr. Zhang De Ming (GUANGZHOU)

The issues involving bicycles are very serious in the city, affecting its traffic. We have 2.22 million bicycles being used in the city. Parking for bicycles is a headache for us, but we are trying to improve the situation, which has had some good effect. For every new building, including shops and residences, construction planning is required to conform to the city planning. Since 1992, for all the buildings of shops, hotels and ordinary houses, regulations have been instituted to make a space for parking bicycles. There are certain square meters assigned in proportion to the building area. Builders must submit their blueprints to the Construction Design Department and the Planning Department. In addition, they must submit a copy to the Traffic Management Department for inspection. After the inspection, the Traffic Management Department gives a revision back to the Planning Department. Then, the Planning Department gets the Construction Department to undertake construction as demanded. When it is considered that the space is not good enough, then, the plan will be denied. This is the big measure we have recently implemented. Another thing is regarding the existing facilities. There is a shortage of space for parking bicycles and cars. For obtaining such areas, we are using open space in residential areas, court yards and school playgrounds. We also have some temporary parking spaces or bicycle stations in rather spacious alleys. We have about 4,000 bicycle stations of this kind in the city. For the convenience of citizens when they just want to go out for shopping, we offer a part of a spacious street in front of stores as temporary bicycle parking space. There are about 2,000 such spaces. These temporary bicycle parking areas are marked in paint on the road. However, these spaces are only for short-time parking for shoppers in nearby stores. As for the bicycles parked in inappropriate areas, they will temporarily be confiscated or removed.

With these measures, Guangzhou City has been successful in decreasing bad effects on traffic and achieving large improvement than before.

Mr. Hung Tung Chun, Louis (HONG KONG)

Thank you. I just want to say I find Mr.Zhang's presentation very interesting and useful. In particular, about the management of the trucks, using often automobile license plates. I just want to ask, you know, because Hong Kong has also considered this option in solving traffic congestion problems in the PC central business district. But we find that there will be a lot of enforcement problems since the beginning of this scheme.

I just wondered whether Mr.Zhang can answer, How is there any enforcement problem with this automobile licensing and also are there any law to set up the check points and is there any problem with traffic queuing up before and after the hours when this automobile license plate is in operation. Thank you.

Mr. Zhan De Ming (GUANGZHOU)

You are questioning how we are getting along with the measures we have introduced. Large trucks are prohibited from entering the city in the daytime and their entrance is also controlled by the last digit of their license number. This system has been in operation for about three years. At the beginning we made announcements of the system being introduced and also advertised it through mass media such as newspapers and TV.

For one month the Guangzhou Municipal Government and the Traffic Management Department tried to inform all the citizens, corporations and companies about the system which regulates the operation of trucks on odd or even-numbered days according to the last digit of license plates. After one month when every resident in the county and the province were well informed of the system, it was put into practice. Besides advertizing through mass communications, the authorities notified companies, offices and groups which own large number of trucks about the new system. We have been quite successful in these preparatory measures.

Whenever a truck is found in the regulated urban area ignoring the system of odd or even-numbered day operation, it is stopped on the spot by us, the traffic police in charge of transport, so that truck drivers dare not get into the area on prohibited days. Even if a truck with an odd digit at its license's end should enter the city on an even-numbered day and go through an intersection unnoticed, it can never escape at the second intersection where the license plate is confiscated.

Therefore nobody is bold enough to violate the system. The enforcement of this system has so far generated few, if any, problems, because the Traffic Management

Department publishes permits for such vehicles which transport particular, urgent goods, vegetables, fish, meat and other foodstuff necessary for citizens' daily life. Vehicles displaying a permit on their windshields are free to enter the city anytime without being stopped by the police. Consequently we have heard few complaints of inconvenient situations. Also, drivers who frequently come into the city, fully aware that they are forbidden to enter the city before seven in the evening, adjust their operation so as to arrive just at the right time, making it unnecessary to wait at the gate. At first some trucks were seen waiting, but no such case has been observed since.

Mr. Teruhide Shinozaki (KITAKYUSHU)

I am Shinozaki from Kitakyushu. I would like to ask about environmental problems. Our city Kitakyushu, formerly an industrial area, used to suffer from a great deal of environmental pollution. However, thanks to the efforts by the whole city to eliminate the pollution, the city's environmental situation has much improved. Naturally we, as members of the municipal government, take special interest in the problems by car exhaust, the measures of CO and NOX. Right now Kitakyushu City is preparing the roads which will enable automobiles to reach the municipal highway in ten minutes from the city center. By doing so, we hope to reduce the amount of traffic passing through the city, which means less traffic jams causing CO and NOX gases. This is a hardware matter. Another attempt on the software side is planting a great number of trees to line the streets against CO.

Now we face the era of motorization on a global scale. I would very much like to know what the officials of Guangzhou City have in mind concerning this situation. That's all. Thank you.

Mr. Zhan De Ming (GUANGZHOU)

As to the measures against automobile exhausts, we place great importance on this subject. In Guangzhou City the number of cars increased from 30,000 to 410,000 during the 10 years from 1984 to 1993. It was an increase of more than ten times. However, air pollution by car exhaust is controlled basically to keep it under the permissible standard set by the government. In order to control the air pollution, we have taken the following measures.

First, the government gave instructions to all the automobile makers so that the amount of exhaust gas from vehicles manufactured by them would be below the permitted level provided by the state. Cars whose exhaust amount exceeds the standard level are not allowed to be shipped. This is our first measure. Secondly, the Traffic Management Department of Guangzhou City has set up a check-up station in every

district where all automobiles are subject to inspection once a year. This is called the annual inspection. Among the items of the car inspection are check-ups for exhaust gas and noise. If a car exceeds the standard level, it is required to be improved. This is the inspection which is required of all cars to take every year. As a third measure, the Departments of Traffic Management and the Environmental Preservation of Guangzhou City have jointly laid down a law for control of car exhaust. Under this law, officials from the two departments are sent to companies to conduct sample inspections. If a car emitting exhaust more than the government standard is found, its owner is ordered to modify the car. Also, officers in charge of traffic control are watching on the streets. When they find a car violating the state regulation of exhaust, or pouring out black smoke, they at once order improvement, confiscate the license, have the car sent to a garage, and the license is returned only after they make sure that the car has been repaired. In addition, a heavy fine is imposed. Once a violator of the traffic control ordinance is detected, he is charged at least 50 yuan. This measure has especially been made strict recently. When a driver who has overridden the limit more than twice is found still driving the car, control officials will force the driver to install an emission purifying device. In short, cars that do not meet the government standard are subject to punishment, fine, and compulsory modifications. Afraid to be detected and punished by the traffic police, drivers are no longer publicly operating cars which override the government standard. Also, officials from the Environmental Preservation Department will note down the license number of an automobile exceeding the exhaust gas limit, tell the driver to modify the car at a car factory and punish him too. Cars in frequent use like taxis, are made to have inspection once in six months. When the amount of emission or any other function is found not to fit the standard, the car is ordered to immediate modification. For large buses, such as long distant buses or buses on a regular route, inspection is even stricter. These buses must undergo inspection every three months. In short, vehicles in frequent use or for commercial use are subject to a shorter cycle of check-up. With these strict measures put into practice, air pollution has been in control within a constant level these past three years, without any deterioration.

Mr. Ross Rutherford (AUCKLAND)

My name is Ross Rutherford from Auckland City. I guess it's also a question of environment. You're very lucky you fortunately have so many cycles, bicycles in a way, and yet you say you are discouraging your cycles, but they're a very efficient form of transport. They don't pollute. Why are you moving in that direction?

Mr. Zhan De Ming (GUANGZHOU)

I don't really understand the question. Are you saying that because the number of bicycles has grown that the situation has improved? Would the interpreter please interpret more clearly. May I have the question again, please.

Mr. Ross Rutherford (AUCKLAND)

Certainly. No problem at all. A bicycle is a very efficient form of transport. It nonpollution, it doesn't require a lot of space, and yet you are discouraging the use of bicycles in your city. If you are concerned about the environment, concerned about pollution, why are you discouraging the use of cycles? It wasn't clear to me.

Mr. Chen Ji Xuan (GUANGZHOU)

I should like to answer to this question myself. In Guangzhou, there are just too many bicycles. You may be surprised to know, but there are 2,220,000 of them. In the 1950s these bicycles may have made a kind of traffic spectacle, but now in the 1990s they are simply a great disaster. Maybe it is a little exaggeration to talk like this, but it is a fact. Seen from the point of environmental protection, it is true the bicycles are free of exhaust gas, air pollution, or noise. However, when there are too many of them, they are a cause of traffic congestion. As to the future of bicycles, if they are turned into instruments for sports and health keeping, like in western countries, the traffic situation of Guangzhou City can hope for a bright future. But the present reality is discouraging. Most people in this city use bicycles as their means of transportation. They are in line when riding, but if they stop, they spread all over the street, occupying a large space. Bicycles are rather slow and occupy a considerable space. Millions of people riding bicycles, when they stop, bicycles are all over the place and block the road. Seen from a wider viewpoint, I think it necessary to discourage bicycles in order to develop the system of public transportation. At present, we are putting resources into the construction of the subway. In the future, to reduce the impact on the road, we are considering the regulation or prohibition of bicycles on the streets where subway has been constructed under the ground, although I am not sure if it can be achieved.

Mr. Zhang De Ming (GUANGZHOU)

I should also like to add a few words. Right now, in Guangzhou City there are 2,220,000 bicycles. We once made a calculation. The road area for four bicycles is equal to that for one motorized vehicle. Then, 2,220,000 bicycles occupy the area for 500,000 motorized vehicles. When the area for 410,000 existing motorized

vehicles is added to this figure, the area for all vehicles will be that for about one million motorized vehicles. Since such a huge part of the current road area is occupied by motorized vehicles, naturally a terrible congestion occurs. For this reason, we have been increasing the amount of investment over the past few years. The municipal government has invested several to ten billion yuan to expand roads every year, but it still runs short. As I have just mentioned, that there are 2,220,000 bicycles equivalent to almost half a million of motorized vehicles in terms of the road area they occupy, is one of the major causes of traffic congestion. So, the future direction must be, as Secretary-General Mr.Chen mentioned before, to place emphasis on public transportation including subways and buses. If one bus can carry 50, or 70 to 80 passengers, it means we can reduce 50 bicycles. So, we are going to encourage developing public transportation. We never encourage the use of motorcycles or private-owned cars. We encourage the use of buses or subways as the means of public transportation. Thank you.

Mr. Leong Siew Mun (KUALA LUMPUR)

Hello. Good morning. My name is Leong Siew Mun from Kuala Lumpur City. I would like to request Mr.Zhang to elaborate on some of the measures, what are the measures or incentives that you encourage those bicycle users to switch to public transportation in view of the fact that a high percentage of all these bicycle users are still using the bicycles. Thank you.

Mr. Zhang De Ming (GUANGZHOU)

I think this is a very good question. Right now, we are placing emphasis on the development of public transportation system, but many people still prefer to use bicycles. Then, what kind of motivation or incentives should we give to bicycle riders to switch to public transportation? We are taking the following measures. The first measure is increasing the number of buses. So far there are only around 2,000 buses in Guanzhou City, and the number is rather limited. Therefore we have to increase the number of vehicles for public transportation. The second measure is providing exclusive lanes for buses, when possible, to increase the speed of buses. We have also improved the quality of public transportation and have made the use of buses more convenient. As for the future, we plan to run air-conditioned buses, such as "Shengfuli", by introducing foreign capital. We also plan to reduce bus fare to the minimum, so as to satisfy bus users. One of the current advantages of Guanzhou City's public transportation is that people can go anywhere in the city by bus with only one yuan. This is really inexpensive. What is considered as another measure is to have companies or public offices give subsidies to businessmen

and citizens who use buses. That is, a certain amount of monthly subsidies is to be given to those people who use buses. And we plan to hold down the price of passes for buses and subways. We are considering very low prices. We are thinking of low prices that amount to one tenth, no, one twentieth of incomes. Right now, a one-month pass for buses costs only 30 or 20 yuan. This is very reasonable. However, for the future we plan to encourage people to use public transportation by increasing the speed of vehicles for public transportation, lowering fare and supplying subsidies. On one hand, we intend to make the use of bicycles less convenient, raise tax on motorcycle users, increase restrictions on the use of motorcycles and private-owned cars, and make various levies heavier. On the other hand, using buses will cost less, will be comfortable and will bring bus users subsidies from public offices. We believe more people will switch to public transportation when they recognize such advantages of using buses.

Mr. Chen Ji Xuan (GUANGZHOU)

I would like to add a few words. In short, we are taking three measures, that is, the administrative measure, the economic measure and the improvement of the quality of services of public transportation. The administrative measure refers, as Vice Director Mr. Zhang mentioned, to securing the exclusive lanes for public transportation. And we also have to restrict the use of bicycles in terms of roads and time. This measure is handled by the administration. The second is the economic measure. For example, we impose further tax and fee on users of bicycles or motorcycles when number plates are issued. On the other hand, people can get subsidies and economic assistance if they use public transportation. For example, companies or public offices supply passes — this is economic motivation. The third is improvement of services. By bettering quality of public transportation services, we encourage citizens to use public transportation.

Chairman

Thank you very much. I am sure there are many opinions on this topic but I would like to move on. Thank you Mr. Chen and Mr. Zhang of Guangzhou for your thorough answers to the all the questions asked. (Applause)