

Good Afternoon, Ladies and Gentlemen,

On behalf of the hosts of this seminar I would like to thank all of you for your participation, and also thank the key note speaker, the presenters, and the commentators for their kind cooperation in presenting this seminar.

Now I would like to explain the aim of the seminar very briefly, and then begin my presentation on the features of the existing Chinese transportation structure and its future problems.

As you well know, China has been developing its economy very rapidly, and it seems to me China functions as an engine for world economic development. China is not alone in its expansion as the Indian economy is also strongly developing.

Due to this growth, many seminars and symposiums on these economies have been held world-wide. However, in this seminar, we would like to look from a different perspective. While there are various problems that accompany rapid economic growth, the one on which we will focus is that of the environment in these big developing countries. More precisely the main theme of this seminar is the growing increase of CO₂ emissions from the road transport sector in these countries, particularly that of China.

It is widely recognized that CO₂ emissions from the transport sector rapidly increase as an economy grows. Furthermore, the experience of developed countries

clearly shows that it is extremely difficult to suppress the pace of this CO₂ increase in the transport sector. According to the study of Dr. Mantzos on European energy and transport trends to 2030, the share of the transport sector among the total CO₂ emission of the EU (25) was 21% in 1990, it reached 26% in 2000, and it will reach 32% by 2020. In 2020, the transport sector will have the biggest share of CO₂ emissions among the various sectors.

Thus, even in the developed countries whose economic growth is moderate, the share of CO₂ emissions from the transport sector continues to rise. So it is very natural that in the countries whose economic growth is very rapid, like China, the increase of CO₂ emissions from this sector is an enormous one.

Based on these well established facts, the Kyoto University Economic Research Center developed a new model which forecasts future CO₂ emissions from the Chinese road transport sector up until 2030, and together with my institute, analyzes its impact. We will report the results at this seminar. Following that, together with the commentators we will discuss the future international environmental policies on this subject.

After my brief presentation, Professor Sawa of Kyoto University will deliver the key note speech on the global climate change and Kyoto Protocol. Mr. Matsuoka of Kyoto University will then explain the features of the new model and the results of the forecast. Following Mr. Matsuoka, Dr. Sanjay Marwah of Japan International Transport

Institute will present his study on Indian CO2 emissions from the road transport sector and their future impacts.

After the coffee break, we will start discussion with Mr. Lee Schipper of the World Research Institute, Mr. Larson from the Environmental Protection Agency, and Mr. Hiraoka from Japan International Transport Institute joining us as commentators.

As I explained, the subject of the seminar is a unique one, and the discussion will stimulate your intellectual curiosity. We hope you will be riveted in your seats. After the session please join us for the reception. We look forward to hearing your thoughts.

Now I would like to move on to my presentation on the features of the existing Chinese transport structure and its future problems.

This table shows the actual results of passenger transport in China by mode of transport since 1980. The table is shown in 100 million passenger kilometers. From this table we can easily observe three important features of the existing Chinese transport structure.

The first is the very rapid growth of the total volume of passenger transport. Within 23 years it has grown 6 times.

The second is that when comparing the year 1980 with 2003, the shares of rail transport, and automobile transport have been completely reversed. The motor vehicle has been the most heavily used transport mode for more than 10 years.

The third is the significantly high share of air transport. For instance, the share of air transport in Japan is 6%. Only the share of the U.S.'s air transport slightly exceeds that of China. If these trends continue in the future, motor vehicles will become the main transport means for short and medium distance transport, air transport will become the main means for long distance, and rail will play a secondary role for passenger transport.

This transport structure is a high energy consuming type similar to that of the USA.

The next table is the Chinese development of land transport infrastructure. It shows the rapid development of road construction, particularly that of the highway. It clearly confirms our previous assessment of the future direction of the Chinese transport structure.

The next subject to discuss is whether or not China has already passed the take-off period of full scale motorization.

We have no common definition of motorization. Therefore, we must temporarily define motorization as follows: Motorization is the process that begins with passenger car ownership in a country continually rising faster than that of conventional speed, to the

time when the majority of the people, for example 60 out of every 100 people in the country own an automobile.

The important task for us is to determine the time of the take-off of full motorization in China. Empirical facts of developed countries teach us that once motorization takes off, the annual increase of passenger cars stays around 10% for more than 20 years after the take-off. No government has ever succeeded in slowing down the rate of increase.

Therefore, through the empirical study of Japanese and Korean motorization, we must try to formulate the numerical criteria which show the start of the take-off period. Through the empirical study of these countries we determined the following three criteria.

And as it is shown in this table, China meets the criteria, at least in 2005. So we can expect that in China, the number of passenger cars will increase annually about 10% for more than 20 years.

This will create a very serious situation in respect to the world environment, not only in air pollution in East Asia, but also for global climate change.

In summary, I would like to reiterate the following points:

1. China is going to establish a high energy consuming type of transport structure.
2. China has already begun full scale motorization.

The next question is what will happen to CO₂ emissions from the Chinese transport sector.

The detailed explanation on this subject will be delivered later by Mr. Matsuoka of Kyoto University.

So I will only show the results of the comparative analysis between China and the developed countries of the Kyoto Protocol in regards to CO₂ emissions in this sector.

This year the Japanese Government decided on a plan for the road transport sector. By the year 2010, it will reduce 10 million tons of CO₂ emissions from the level of emissions in 2002.

And the EU commission (EU 15) decided on a plan to maintain their CO₂ emissions so that by 2010, the CO₂ emissions for this sector will remain at the same level as those of 2002.

Thus, total CO₂ reduction of the road transport sector in the developed countries of the Kyoto Protocol will be 10 million tons by the year 2010. However, according to our forecast, during this period of time from 2000 to 2010, China will increase its CO₂ emissions by around 120 million CO₂ tons.

If China discharges CO₂ from this sector, as we forecast, the efforts of the EU and Japan will be almost meaningless from the viewpoint of the prevention of global climate change.

And by the year 2030, the situation will be undoubtedly more serious.

Furthermore, in addition to China, India will in the days ahead, highly develop its economy and the CO₂ emissions from this sector will also be an extremely enormous amount.

We are obliged to conclude that without the involvement of these developing countries in the scheme of the reduction of GHG, it is impossible to achieve meaningful results for the prevention of global warming.

However, is it realistic that these countries join the international policies for CO₂ reduction, in spite of the fact that their main economic policies are to achieve high

economic growth and catch up with developed countries? I think it will be possible because it is a common policy of these countries to save energy, particularly in oil consumption.