

NO.7 The criticism of motor vehicle traffic system -2

The world volume of motor vehicles owned in 1999 was 520 million, which averages one car in 11.5. Like other consuming goods, there is a significant difference in volume between the industrialized countries and the developing countries. For example, it is one car in 2.5 in the United States and Japan as well as Europe; still it's only one car in 224 Indians and 279 Chinese. 39 million motor vehicles were produced in 1999, and 38% of the production was in Western Europe, 29% in Asia (about 25% in Japan), and 19% in North America. In industrialized nations it is typical that the number of motor vehicles owned tends to grow. As there has been the economic growth in developing countries recently, so the volume of motor vehicles registered has been increasing rapidly in Asia and South and Central America. In China for instance, the economy has grown remarkably, and the number of automobiles owned has been increasing. If the automobile were popularized like Japan to one car for two men, 600 million and more cars will overflow on roads in China. It will exceed the current world volume of motor vehicles registered only in one nation China, so when thinking of the problem such as the influence over the health, the traffic congestion and so on, it is unthinkable. Accordingly it is hard to imagine how much influence it will have on air pollution and global warming when the automobile becomes popular in developing nations. Now that the world population reaches as high as 6 billion people, it is obvious that on this earth there is no such air purifying capacity, which affords to support the current motor vehicle traffic system that heavily depends on fossil fuel.

The automobile is the "transporting" equipment (its structure might be too complicated to regard a tool). In general, the owner-driven car is used for a fairly short time as means of transportation, and most cars usually spend most of the time at a parking lot. It becomes clear from calculation about how long people spend time in driving daily. For example, in Holland the average time a car is used for private purpose is 1 hour 12 minutes per day (the average in Japan is less than that), so the car is left parked for about 23 hours without being used. In other words, the privately owned car, 95% of its lifetime is in fact kept at a parking lot. If the equipment in the manufacturing company operates only for 1 - 2 hours a day (5-10%), this company will certainly go bankrupt. Paying the price for such convenience as to use a car whenever necessary doesn't sound very efficient.

The advanced technology has significantly improved fuel efficiency of the motor vehicle which requires fossil fuel, but in many developed countries the fuel-consuming automobile such as SUV, van and so forth, became popular, and therefore has been offsetting such technological benefits. In addition, in developed countries (especially Japan), when parcels of the same-day and/or next-day delivery increase, it lowers the fuel efficiency and carrying productivity, and consequently boosts the amount of CO₂ emission. (Currently in Japan, the small track on average loads only 50% of its

carrying capacity).

Unless a sufficient environment education is enforced under the market economy where only the consumer gusto takes precedence, there won't be an adequate technology advancement to improve the environment. The way of which has to be "wants now and immediately" or "Just-in-time" thinks much of the present time and could be draining time and environment assets for future generation.

Generally, the automobile (passenger car) is not a superior transporting machine because it requires nearly a thousand kilograms of car body when a person weighing 60 to 80 kg is driving alone. Additionally, it requires at least a month of training to drive a car. The excellent technology should be the one which anyone can easily and safely handle. No matter how high the performance is, the motor vehicle continues to consume a great deal of fossil fuel, causes the air pollution, and also changes our environment by building a road, and thus never be perfect as the technology of 21st century. It is essential to create the new traffic system which is radically shifted by moving out of the paradigm, for the future transportation means.

The CO2 emission ratio of Japan is divided to 40% from the industrial part, 25% from the people's livelihood, and 20% in transporting division. While the growth rate of CO2 emission from both industrial causes and people's living has slowed down since 1990, in the transportation division it soared significantly due to an increase in automobiles, by 20.3% which approximately account for a half (45 million ton) of the entire increase (98 million ton) in Japan since 1990. For the future control of CO2 emission, it is important to work on the highest CO2 in the industrial section by shifting into clean energy and take some measures on growing emission of the transporting sector. (The global warming prevention scenario in 2010 by Yoichi Mizutani)

"The American society; the automobile no matter what happens" (World Watch Japan Vol.13 No.5)

The actual state of land use in the city of Los Angeles

The roads or parking lots, the area used for the motor vehicle.....70%
The area of parks or open space.....5%

The number of deaths due to the accidents caused by Amtrack (National Railroad

Passenger Corporation) since 1971.....100 or less
The deaths by the automobile accident (annually) over 40,000
The deaths by the passenger aircraft accident (in 1971)7
Pedestrians and cyclists who died because of car accidents (in 1971)6,100
(This number is equivalent to the ratio of when the aircraft accident with no survivor occurs once per two weeks)

The number of people who were asked for moving out for constructing new highway (annually)	100,000
Croatians who were forced to leave the country because of the war (in 1997).....	100,000
The price of gasoline and fuel efficiency (when driving for 240 million km)	
<i>Insight</i> by Honda.....	\$415 (28km/L)
2000 <i>Land Rover</i> by Land Rover Inc.	\$1800 (6km/L)
The car mileage	
Gross mileage of Japan, Germany, France, Sweden, Italy, Canada, & UK	2.6 trillion Km
The United States	2.4 trillion Km

* The copyright of this article belongs to Creature National Institute for Environmental Studies.