Efforts for Environmentally Sustainable Transport in Japan

February 24th, 2009

MOE: Ministry of the Environment, Japan MLIT: Ministry of Land, Infrastructure, Transport and Tourism, Japan

Outline

- Promotion of Public Transportation Measures
- Non-Motorization Vehicles
- Land Use Measures
- Road Safety Measures and Public Health Issues
- Energy Efficiency
- Conclusion

Act on Promotion and Restoration of Regional Public Transport (Act No.59 of 2007)



Seamless Transfer Using Electronic Money

- Easy to transfer using PASMO and SUICA
- Number of total cards issued: 38 million 42 million inhabitants in the Tokyo Metropolitan area 24 Train operators and 68 Bus transit Operators in the area





Bus Location System

Improve convenience by sending information on real-time bus operations to mobile phones



· Improve user service

http://www.hrr.mlit.go.jp/road/hrr-conference/2nd-data2-7-8.pdf#search

Promote Bicycle Use (1)

The prototype of bicycle friendly development is conducted in the 98 pilot areas

- Bicycle lanes and roads 2,660km (2007) : bicycle lane per road = 0.2%
- Bicycle use is promoted by bicycle friendly network development



Promote Bicycle Use (2)

Case example of the "Bicycle Lane"

Reduce vehicle Lane to create New Bicycle Lane











Bicycle Commuting Becoming Popular

- In Japan, there are many companies that permit their employees to commute by car even if it is a short distance.
- On the other hand, there is a movement that environmentally conscious private companies encourage their employees to shift from car commuting to bicycle commuting.



Low-Carbon Community Development Local Measures Promotion Project

- **[Objective]** Change the existing "community" to a low-carbon community by changing its city structure and social capital through the control of vehicle transportation demands, the improvement of public transportation convenience and the utilization of un-used energy and national capital, to create a model low-carbon society.
 - Construct a community/city structure where amenities are allocated within walking distances
 - Make a thorough, low-carbonate community concurrently with the town reorganization by ensuring "wind paths" and intensively introducing renewable energy.



The Number of Traffic Accident Fatalities Has Been Steadily Decreasing

- Annual traffic fatalities in 2008 were 5155, having achieved the goal of making the annual number less than 5500 by 2010, two years earlier.
- Within the next 10 years or so starting from this year, we will decrease traffic fatalities by 50% and work towards the realization of the world's safest road traffic.



Occurred Most Frequently Among Those Riding in Automobiles

Fatalities occurred most frequently among those riding in automobiles.

Total traffic accident fatalities were reduced through the decrease in riding in automobiles



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Decrease of fatality rates by fasten seatbelt



- 1. Source of information: the National Police Agency
- 2. Percentage of persons who fasten seatbelts = Number of persons killed/injured when fastening seatbelts (while driving) / Number of persons killed/injured (while driving) x 100
- 3. Fatality rate (while driving) = Number of persons killed (while driving) / Number of persons killed/injured (while driving) x 100

[Source] White paper on traffic safety 2008, National Police Agency

Fewer Drunk Driving Fatalities (Down by Half From 10 Years Ago)

The reduction in drunk driving fatalities in recent years is the effect of reinforced drunk driving penalties and other measures

Established heavier penalties for driving while intoxicated (DWI) and anti-drunk driving efforts led by relevant agencies and groups. the Law for Partial Amendment of the Road Traffic Law (Law No. 51 of 2001)



Notes: 1. Source: National Police Agency

Primary party is the party most to blame for the accident, or, when the parties involved share nearly equal fault, the party that suffered the least harm.

Monitoring of air pollution

In accordance with the Air Pollution Control Law, state of air pollution is constantly monitored throughout Japan at 2,006 monitoring stations by prefectural and ordinance-designated municipal governments.

- -1,561 ambient air pollution monitoring stations
- 445 roadside air pollution monitoring stations

[Source] http://soramame.taiki.go.jp/





Air Quality in Japan

Air quality has been improved in general, however there remain still some areas, where it should be further improved, mainly in metropolitan areas.



[Source] Road side air pollution monitoring Stations

Automobile NOx/PM Law (1)

Special measures for air pollution in metropolitan areas

➤Target Areas

Metropolitan Areas

- Tokyo metropolitan area, Nagoya, Osaka, and Kobe

≻Goal

To comply with EQS (NO₂ & SPM) by 2010

≻Measures

- Total Emission Reduction Master Plan by Local Governments
- Restriction of outdated vehicles' renewed registration
- Vehicles Management Plan by Enterprises

Automobile NOx/PM Law (2)



Amendment of Automobile NOx/PM Law (1)

- Date of enforcement January 1, 2008
- **Goal** To achieve EQS by 2010 as soon as possible
- New measures
 - (1) Measures for local pollution
 - Designation of "Priority area" by prefectural governor
 - Obligation of measures for new specified buildings
 - (2) Measures for inflow vehicles
 - Expanding to surrounding areas where vehicle operation businesses are obliged to make measures
 - Obligation of effort for cargo owner

Amendment of Automobile NOx/PM Law (2)

Expanding to surrounding areas for obligation of measures

 Conventional area for obligation
Newly expanded area for obligation ("Surrounding area")

Flow of designation of surrounding area

- Priority area of measures for inflow vehicles is designated
- 2. Surrounding area where many vehicles inflow to the above area is designated

Vehicle Emission Standards Frame work of vehicle emission control

Trends of regulations (Vehicle Emission Standards)

Transition of emission regulation on NOx in Japan

Maximum permissible level of vehicle exhaust for Air Pollution Control Law after 2009 has revised in December, 2007

Comparison of emission regulation Japan, USA, EU

Setup of environmental criteria for micro particle matters with a small diameter (PM 2.5) in December, 2008.

CO₂ Emissions in Japan's Transport Sector

- CO₂ emissions from transport have been decreasing after peaking in FY2001.
- Freight vehicles: Decreasing from FY1996; Private automobiles: Decreasing from FY2001.

* "Other Modes" includes emissions from buses, taxies, railways, ships and aircraft.

Action Plan for Achieving a Low-carbon Society

Environmental technologies have become the new competitive force. Widespread use: accum. 1 million cars

Japan's targets (the long-term goal) :

Reducing 60 to 80 percent of its current level of emissions by 2050

For example : Introduction of next-generation vehicles

Target : By 2020, make next-generation cars account for 50% of new car sales in order to promote emission cuts in the transportation sector that accounts for approx. 20% of carbon dioxide emissions in Japan.

Photo at the Japan National Press Club in June 2008, The Prime Minister at the time was Yasuo Fukuda.

Hybrid Vehicle, Toyota

i MiEV Scheduled to be released in summer of 2009

Electric Vehicle, Mitsubishi Motors

Low-Emission Car Diffusion Support Measures

Promoting the use of Eco-cars that are environmentally friendly through financing subsidiaries, loans and tax breaks, Pilot project to Launch EV.

Pilot Project

Financing Subsidiaries

1/2 of the difference in value between current vehicles for the introduction of CNG buses / trucks, authorised hybrid buses / trucks

1/3 of upgrading costs for upgraing to CNG vehicles

Loans

Low-interest Loans from the National Treasury for Medium and Small Businesses

Tax breaks

Electric vehicles (including fuel cell vehicles), natural gas vehicles, methanol vehicles and low-consumption or lowemission gas authorised vehicles (including LPG vehicles) are, when they are registered as new vehicles in 2006 or 2007, eligible for vehicle tax reductions for one year in the following year.

Top-runner Approach for Fuel efficiency Regulations

■ Current fuel efficiency standards (Target year: 2015)

- March 2006: World's first standards for heavy-duty vehicles (trucks, buses etc.)
- July 2007: Stricter standards for light-duty vehicles

Average Fuel Efficiency of New Gasoline Vehicles

[Source] Ministry of Land, Infrastructure and Transport)

Promotion of Eco Driving(Green Driving)

Kyoto Protocol Goal Achievement Plan (approved by cabinet) (extract) (Overall revision on Mar 28, 2008)

- Promotion of environmentally conscious vehicle usage
- Diffuse and promote Eco Drive (Stopping engine idling when vehicle is stopped or parked, safe driving at a constant speed according to the traffic levels, etc).
- To achieve the above, raise the nation's awareness through PR activities by the Eco Drive Diffusion Network consisting of the 4 concerned ministries playing the central role, and prepare the environment for Eco Drive diffusion (the rest is omitted)

Action Plan for the Diffusion and Promotion of Eco Drive Eco Drive Diffusion Network June,2006 The project covers things that the government, local governments, private organizations and drivers, etc must work on with an aim of sufficient diffusion and implementation of Eco Drive

- Position November as "Eco Drive Promotion Month" and aggressively work to diffuse and promote Eco Drive.
- Formulate a new "10 tips for Eco Drive" and use it commonly for the diffusion and promotion of Eco Drive.

1.Softly depress the accelerator "e Start"	6.Properly perform warm-up.
2.Drive with less acceleration and deceleration	7.Utilize traffic information
3.Release the accelerator early	8.Frequently check the air pressure of the tires
4.Use the air conditioner moderately	9.Leave unnecessary items
5.Stop idling	10.Don't park the car illegally

Promotion of Eco Driving(Green Driving)

Case Example of Eco Driving(Green Driving) measures

Outline of Eco Drive (EMS)

Clean Asia Initiative

Support for the Asian Economic and Environmental Community Vision

- Asian Model for Low Carbon & Sound Material-Cycle Society
- Develop economically while living in harmony with the environment to build a sustainable society

Objectives of policies and their fundamental direction

Achieve a low-carbon and low-pollution society

 Share a vision to accelerate the shift to a low-carbon society
Promote co-benefit type development that simultaneously achieves countermeasures against environmental pollution and global warming

Achieve a sound material-cycle society

>Formulate a Vision for Sound Material-Cycle Society in East Asia

Support the 3Rs in each country using Japan's technologies. Stop improper transfer of recyclable resources across borders.

Adapt to climate change and achieve a society in harmony with nature

 Propose a model of harmony with nature
Improve soft and hard infrastructure for adaptation measures
Understand/foresee impact/vulnerability through observation and research

Cross-sectional Goals: Promote "greening" in the market

- > Promote green purchasing and greening of the supply chain
- Promote environmentally friendly economic activities in financial and capital markets

Establish Fundamental Partnerships

- Strengthen partnerships that support a society in harmony with nature
- Standardize and network environmental monitoring and countermeasures
- > Preserve the mutual supportiveness of environment and trade
- Develop and utilize human resources

(Expand a package composed of Japan's experiences/technologies/organizations/systems while taking into consideration country's traditions and culture)

Promote and support The Regional EST Forum in Asia through the Clean Asia Initiative

INNOVATION FOR A GREEN ECONOMY AND SOCIETY (1)

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INNOVATION FOR A GREEN ECONOMY AND SOCIETY (2)

Support some of East Asia cities intensively, and form a model city of a low carbon society and a sound material society

Thank you for your attention!!

For more information, please visit our Website

Ministry of the Environment http://www.env.go.jp/en/

Ministry of Land, Infrastructure and Transport http://www.mlit.go.jp/english/index.html

Ministry of the Environment Government of Japan

