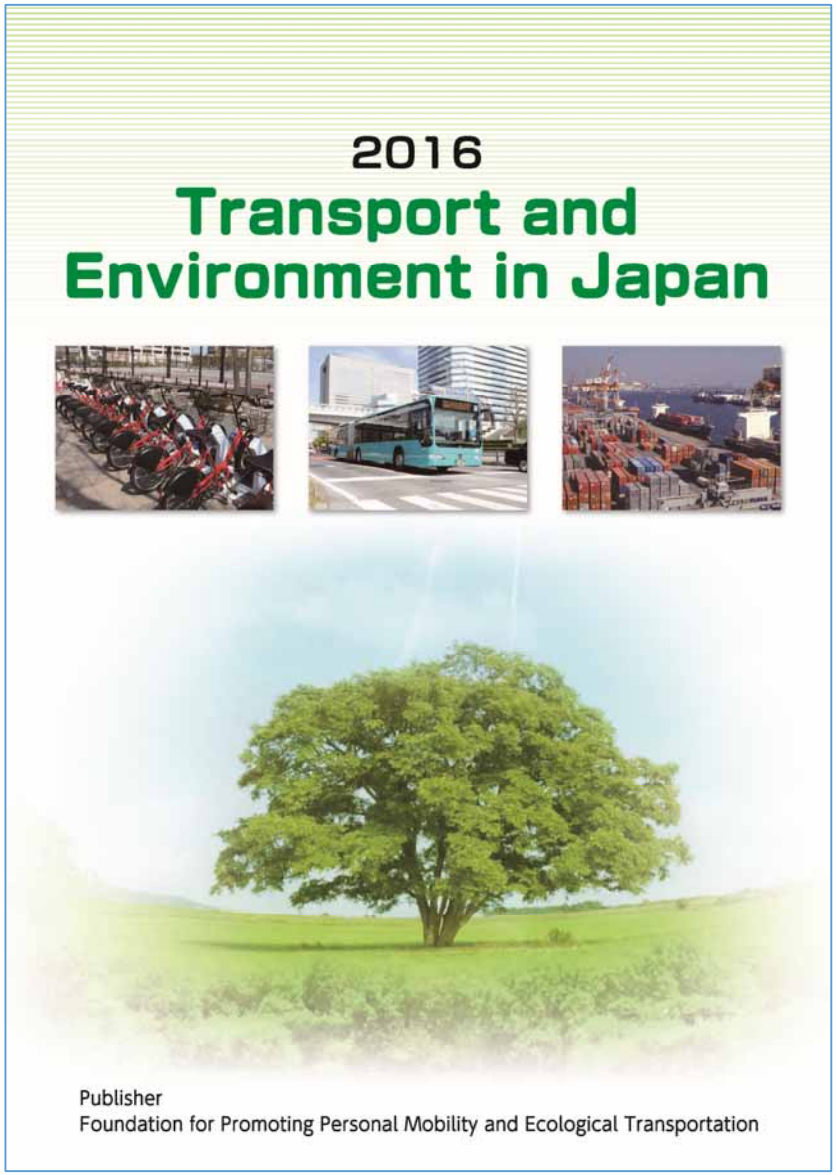
Launch of Report on “Transport and Environment in Japan 2016”

Publisher

Foundation for Promoting Personal Mobility and Ecological Transportation (Eco-Mo Foundation)



Foundation for Promoting Personal Mobility and Ecological Transportation

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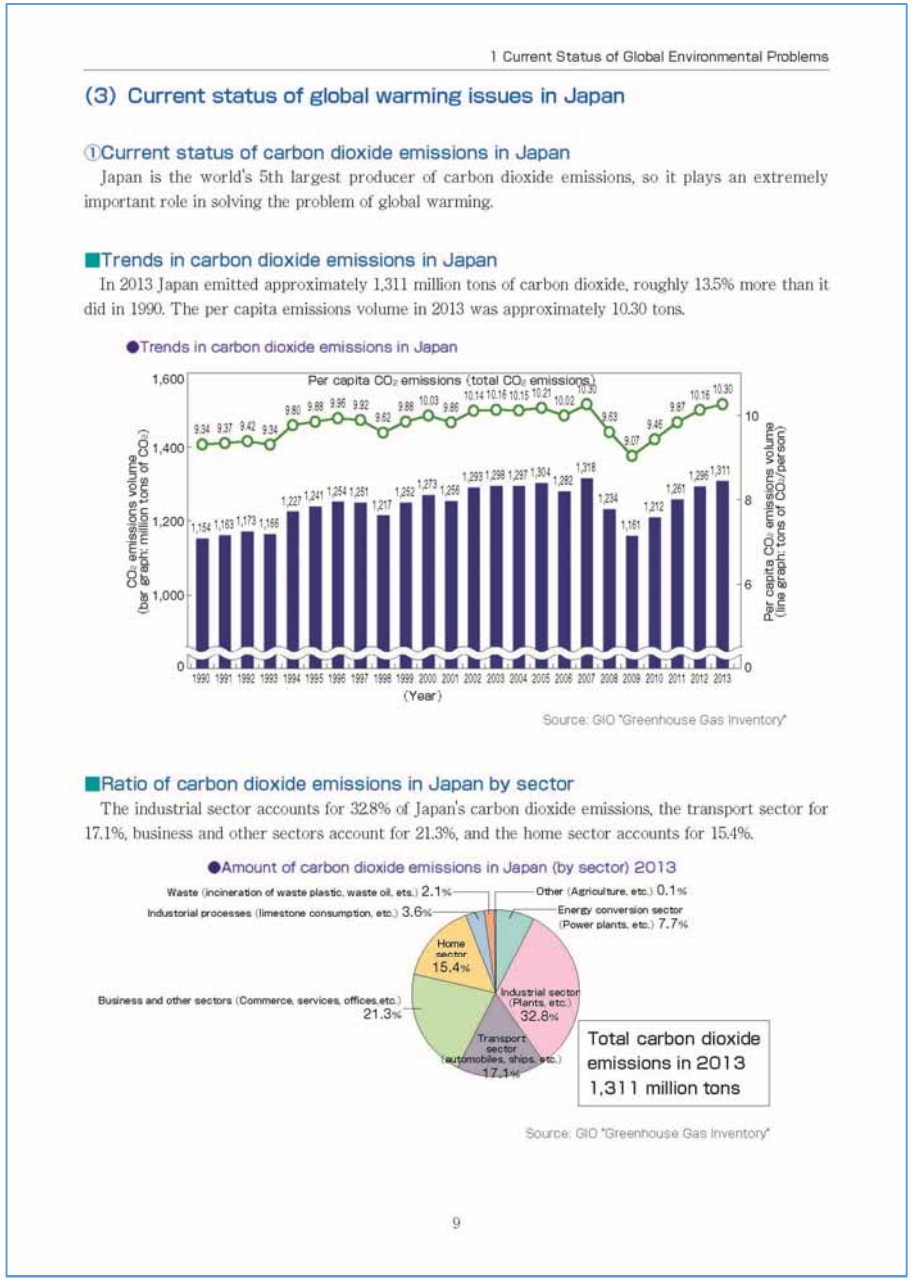
- **Trends in carbon dioxide emissions in Japan**
  - **Total carbon dioxide emissions in 2013:**
    - **1,311 million tons of CO2**
  - **Per capita CO2 emissions:**
    - **10.30 tons of CO2/person**

- **Amount of carbon dioxide emissions in Japan 2013**
  - **Transport sector: 17.1%**



1 Current Status of Global Environmental Problems

(3) Current status of global warming issues in Japan

①Current status of carbon dioxide emissions in Japan

Japan is the world's 5th largest producer of carbon dioxide emissions, so it plays an extremely important role in solving the problem of global warming.

■Trends in carbon dioxide emissions in Japan

In 2013 Japan emitted approximately 1,311 million tons of carbon dioxide, roughly 13.5% more than it did in 1990. The per capita emissions volume in 2013 was approximately 10.30 tons.

●Trends in carbon dioxide emissions in Japan

Source: GIO "Greenhouse Gas Inventory"

■Ratio of carbon dioxide emissions in Japan by sector

The industrial sector accounts for 32.8% of Japan's carbon dioxide emissions, the transport sector for 17.1%, business and other sectors account for 21.3%, and the home sector accounts for 15.4%.

●Amount of carbon dioxide emissions in Japan (by sector) 2013

Source: GIO "Greenhouse Gas Inventory"

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Current status of global warming issues in the transport sector

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●Trends in carbon dioxide emissions by the transport sector

From 1990 to 1996 the amount of carbon dioxide emitted by the transport sector rose by 22.6%, but the rise in emissions then slowed, and began falling from 2001 onwards.

In 2013 the amount of carbon dioxide emissions was approximately 225 million tons, 9.2% more than in 1990.

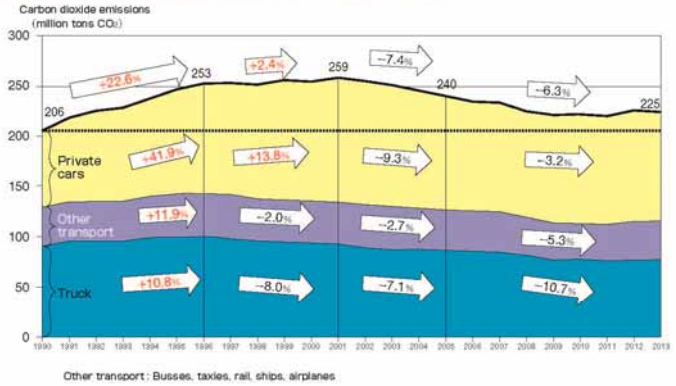
(4) Current status of global warming issues in the transport sector

①Current status of carbon dioxide emissions by the transport sector

■Trends in carbon dioxide emissions by the transport sector

From 1990 to 1996 the amount of carbon dioxide emitted by the transport sector rose by 22.6%, but the rise in emissions then slowed, and began falling from 2001 onwards. In 2013 the amount of carbon dioxide emissions was approximately 225 million tons, 9.2% more than in 1990.

●Trends in carbon dioxide emissions by the transport sector



Other transport : Busses, taxies, rail, ships, airplanes

Source: MLIT website (Tentative Translated by Eco-Mo Foundation)

Carbon dioxide emissions from automobiles accounts for 86.4% of total carbon dioxide emissions produced by the transport sector. 48.4% of these carbon dioxide emissions are produced by private cars.

■Carbon dioxide emission rates by the transport sector

Comparing passenger transport carbon dioxide emission rates (the amount of carbon dioxide emitted in transporting a person for 1km), private cars emit 6.7 times more carbon dioxide than rail transport. Therefore in order to reduce carbon dioxide emissions, the use of public transportation, which has smaller carbon dioxide emission rates than private vehicles, need to be promoted.

For freight transport carbon dioxide emission rates (the amount of carbon dioxide emitted in transporting one ton of freight for 1km), private truck emit 48 times more carbon dioxide than trains, 31 times more than ships, and 6 times more than commercial truck. There need to be a modal shift, moving to efficient use of commercial truck, ships, and trains, improving distribution efficiency.

Carbon dioxide emission rates by the transport mode

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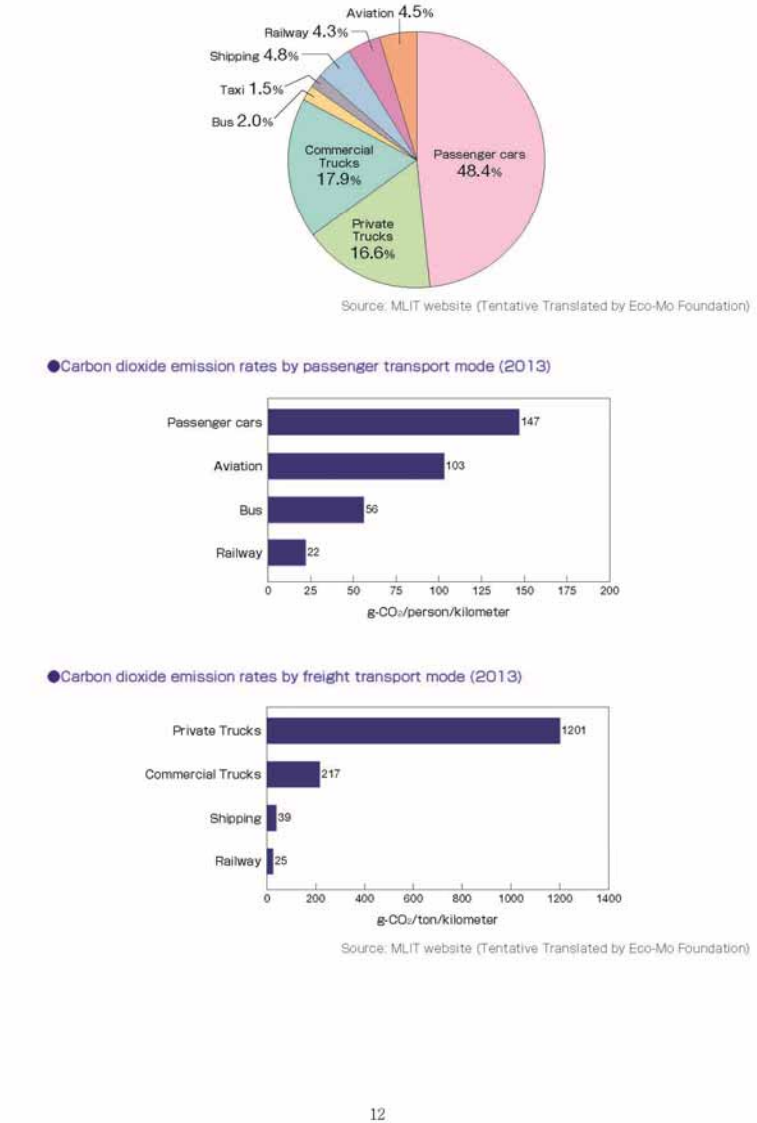
●Passenger transport mode (g-CO2/person/kilometer)

- Passenger cars: 147
- Aviation: 103
- Bus: 56
- Railway: 22

●Freight transport mode (g-CO2/ton/kilometer)

- Private Trucks: 1201
- Commercial Trucks: 217
- Shipping: 39
- Railway: 25



II. Current status of major environmental problems of the transport sector

●Amount of carbon dioxide emissions from the transport sector (by means of transportation) 2013

Source: MLIT website (Tentative Translated by Eco-Mo Foundation)

●Carbon dioxide emission rates by passenger transport mode (2013)

●Carbon dioxide emission rates by freight transport mode (2013)

Source: MLIT website (Tentative Translated by Eco-Mo Foundation)

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Transport sector countermeasures

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- **Vehicle and road traffic policies**
  - Measures for individual vehicles
    - Environmental consideration in driving
  - Measures for traffic flow
- **Create transport systems with minimal environmental impact**
  - Optimizing logistics
  - Promoting the use of public transportation
- **Other**
  - Enhancing energy efficiency in railroads, shipping and aviation

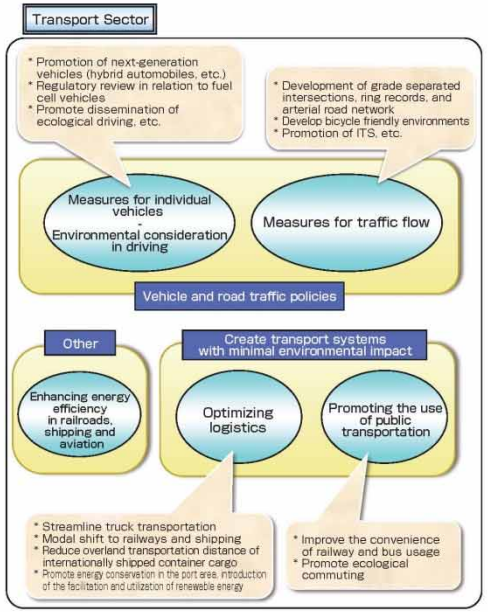
Ⅲ. Measures in Response to Major Environmental Problems of the Transport Sector

1 Promotion of global warming countermeasures

(1) Transport sector countermeasures

The amount of carbon dioxide emitted by the transport sector in 2013 was 9.2% greater than the amount emitted in 1990, but emissions volume has been decreasing since 2001. In order to ensure that this decrease continues steadily, the MLIT is promoting comprehensive measures such as automobile and road traffic measures, distribution efficiency improvements, and promoting the use of public transportation.

●Global warming countermeasures of MLIT



Source: MLIT "White Paper on Land, Infrastructure, Transport and Tourism in Japan 2014" (Tentative Translated by Eco-Mo Foundation)

Fuel efficiency improvements through Top Runner Standards

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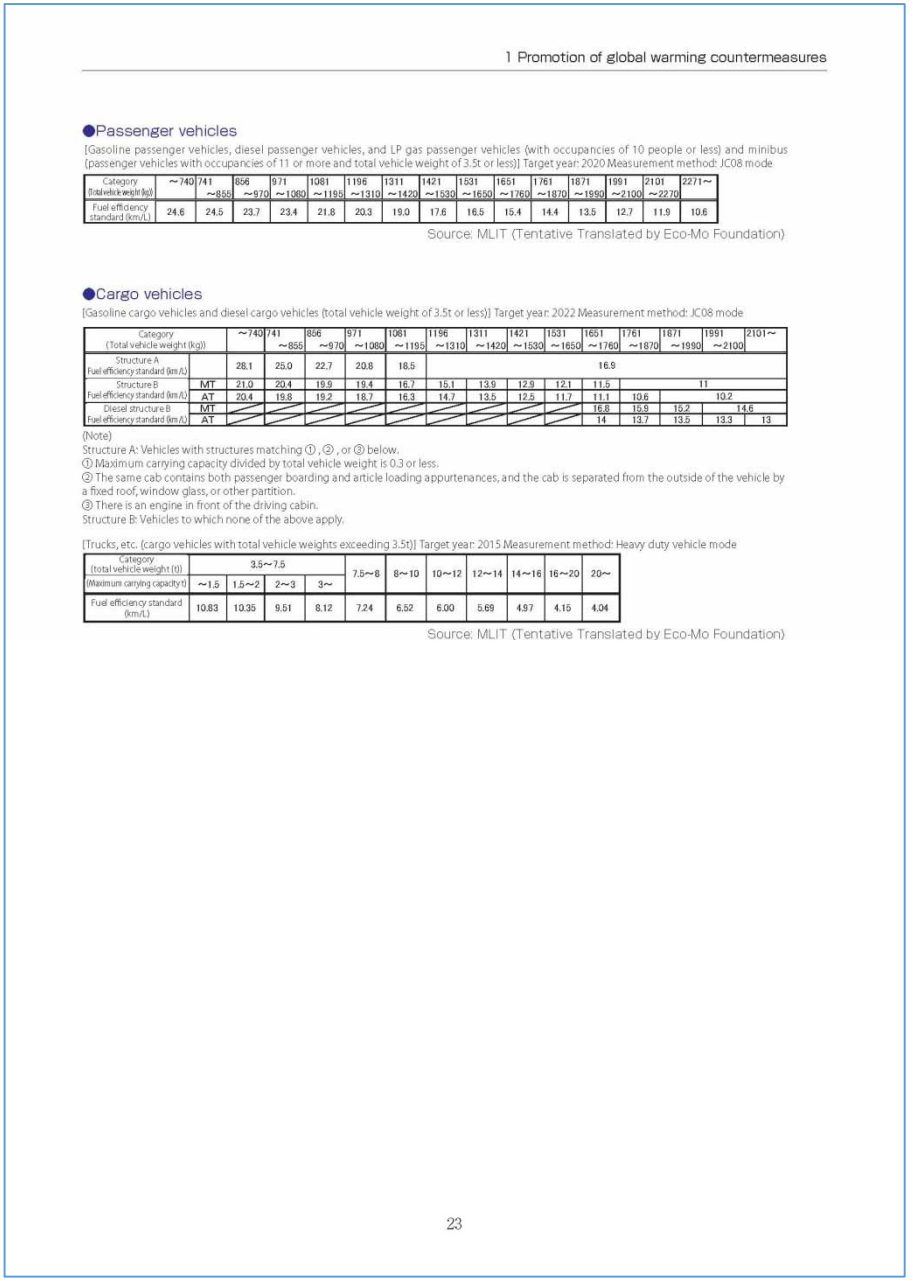
●Fuel efficiency standards

Passenger vehicles, aimed at 2020, requiring fuel efficiency to be improved by 24.1% versus actual 2009 figures, assuming a shipped vehicle composition equivalent to that of 2009.

Cargo vehicles, aimed at 2022, based on the assumption of equivalent shipment volume as in 2012, requiring them to be 26.1% more fuel efficient than vehicles sold in.



1 Promotion of global warming countermeasures

●Passenger vehicles

[Gasoline passenger vehicles, diesel passenger vehicles, and LP gas passenger vehicles (with occupancies of 10 people or less) and minibus (passenger vehicles with occupancies of 11 or more and total vehicle weight of 3.5t or less)] Target year: 2020 Measurement method: JC08 mode

Category (Total vehicle weight (kg))	～740	741 ～855	856 ～970	971 ～1080	1081 ～1195	1196 ～1310	1311 ～1420	1421 ～1530	1531 ～1650	1651 ～1760	1761 ～1870	1871 ～1990	1991 ～2100	2101 ～2270	2271～
Fuel efficiency standard (km/L)	24.6	24.5	23.7	23.4	21.8	20.3	19.0	17.6	16.5	15.4	14.4	13.5	12.7	11.9	10.6

Source: MLIT (Tentative Translated by Eco-Mo Foundation)

●Cargo vehicles

[Gasoline cargo vehicles and diesel cargo vehicles (total vehicle weight of 3.5t or less)] Target year: 2022 Measurement method: JC08 mode

Category (Total vehicle weight (kg))		～740	741 ～855	856 ～970	971 ～1080	1081 ～1195	1196 ～1310	1311 ～1420	1421 ～1530	1531 ～1650	1651 ～1760	1761 ～1870	1871 ～1990	1991 ～2100	2101～
Structure A Fuel efficiency standard (km/L)		28.1	25.0	22.7	20.8	18.5	16.9								
Structure B Fuel efficiency standard (km/L)	MT	21.0	20.4	19.9	19.4	16.7	15.1	13.9	12.9	12.1	11.5	11			
	AT	20.4	19.8	19.2	18.7	16.3	14.7	13.5	12.5	11.7	11.1	10.6	10.2		
Diesel structure B Fuel efficiency standard (km/L)	MT										16.8	15.9	15.2	14.6	
	AT										14	13.7	13.5	13.3	13

(Note)
Structure A: Vehicles with structures matching ①, ②, or ③ below.
① Maximum carrying capacity divided by total vehicle weight is 0.3 or less.
② The same cab contains both passenger boarding and article loading appurtenances, and the cab is separated from the outside of the vehicle by a fixed roof, window glass, or other partition.
③ There is an engine in front of the driving cabin.
Structure B: Vehicles to which none of the above apply.

[Trucks, etc. (cargo vehicles with total vehicle weights exceeding 3.5t)] Target year: 2015 Measurement method: Heavy duty vehicle mode

Category (total vehicle weight (t))	3.5～7.5				7.5～8	8～10	10～12	12～14	14～16	16～20	20～
(Maximum carrying capacity t)	～1.5	1.5～2	2～3	3～							
Fuel efficiency standard (km/L)	10.83	10.35	9.51	8.12	7.24	6.52	6.00	5.69	4.97	4.15	4.04

Source: MLIT (Tentative Translated by Eco-Mo Foundation)

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Promotion of environmentally friendly automobile usage

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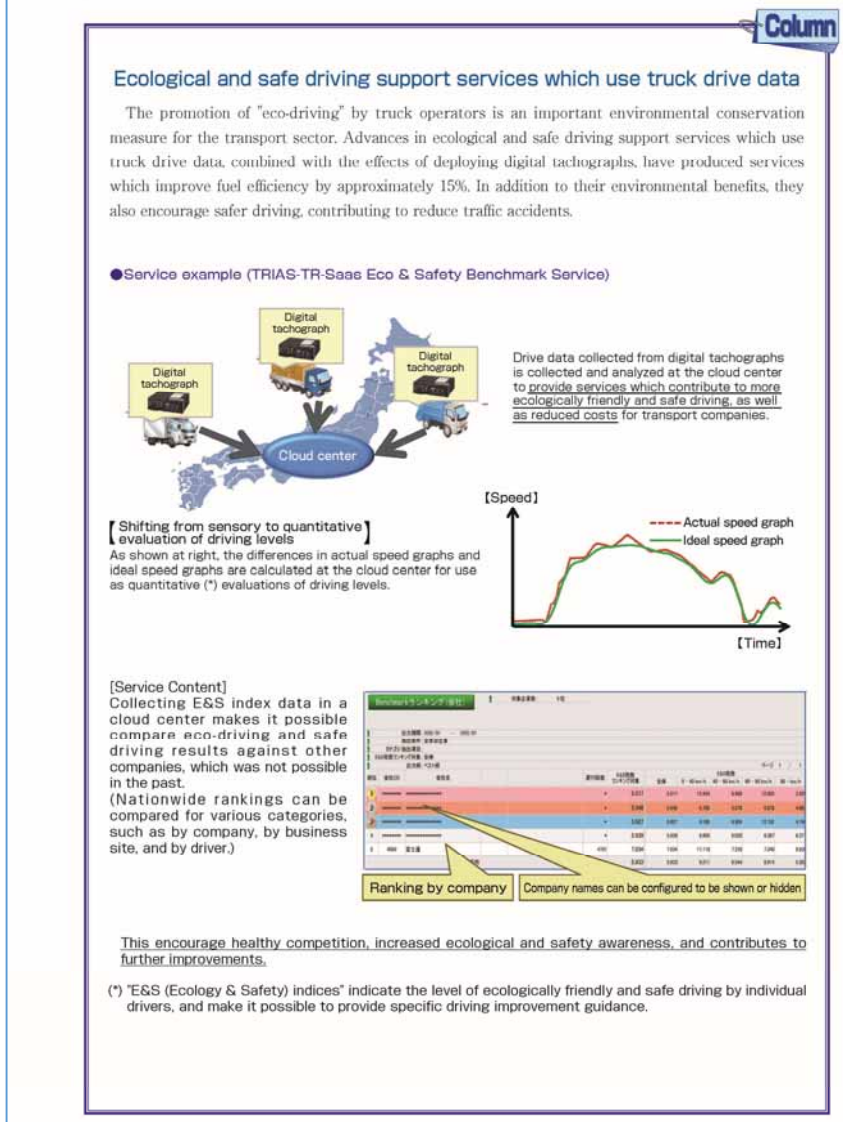
10 Tips for Eco-driving

1: Accelerate gently.
2: Maintain a steady speed and keep your distance.
3: Slow down by releasing the accelerator.
4: Make appropriate use of your air conditioner.
5: Don't warm up or idle your engine.
6: Plan your itinerary to avoid congested routes.
7: Check your tire pressure regularly.
9: Respect parking rules and regulations.
10: Check the readings on your fuel efficiency monitoring equipment.



Ⅲ. Measures in Response to Major Environmental Problems of the Transport Sector

Column

Ecological and safe driving support services which use truck drive data

The promotion of "eco-driving" by truck operators is an important environmental conservation measure for the transport sector. Advances in ecological and safe driving support services which use truck drive data, combined with the effects of deploying digital tachographs, have produced services which improve fuel efficiency by approximately 15%. In addition to their environmental benefits, they also encourage safer driving, contributing to reduce traffic accidents.

●Service example (TRIAS-TR-Saas Eco & Safety Benchmark Service)

Drive data collected from digital tachographs is collected and analyzed at the cloud center to provide services which contribute to more ecologically friendly and safe driving, as well as reduced costs for transport companies.

【Shifting from sensory to quantitative】 evaluation of driving levels

As shown at right, the differences in actual speed graphs and ideal speed graphs are calculated at the cloud center for use as quantitative (*) evaluations of driving levels.

[Service Content]
Collecting E&S index data in a cloud center makes it possible compare eco-driving and safe driving results against other companies, which was not possible in the past.
(Nationwide rankings can be compared for various categories, such as by company, by business site, and by driver.)

This encourage healthy competition, increased ecological and safety awareness, and contributes to further improvements.

(*) "E&S (Ecology & Safety) indices" indicate the level of ecologically friendly and safe driving by individual drivers, and make it possible to provide specific driving improvement guidance.

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Promotion of traffic flow measures

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Eco-Mo Foundation

●Deployment of ETC2.0 service

From October 2014 installed ITS spots and on-board devices have been used to provide "ETC2.0", a new service, in addition to conventional automatic toll payment service, that provides driving support, etc., to drivers on expressways.

●Guideline for the creation of safe and comfortable bicycle use environments

Bicycles play an important role as familiar and easy to use means of transportation, but bicycle accidents are accounting for a growing share of overall traffic accidents. As health and environmental awareness grows, usage needs for bicycles are on the rise.

Foundation for Promoting Personal Mobility and Ecological Transportation

③Promotion of traffic flow measures

Smoother traffic flow increases driving speeds, which in turn produces greater effective fuel efficiency and reduces carbon dioxide emissions from vehicles. MLIT is implementing various traffic flow measures.

Specifically, these include the enhancement of arterial road networks, such as ring roads, which are effective at reducing the amount of traffic influx into central urban areas by providing alternate traffic routes, the creation of multilevel intersections, the promotion of projects for continuous grade separation, etc., in order to eliminate unopened railroad crossings, and other initiatives for reducing traffic congestion in urban areas. They also include the use of big data collected using ITS technology, the optimization of existing networks, and other efforts for promoting smart use of roads in order to provide smooth, safe transportation services. Furthermore, they are also maintaining and improving bicycle traffic spaces through the reallocation of road space, etc. In order to reduce the carbon footprint of road facilities, LED road lighting is being installed and renewable energy is being used.

■Deployment of ETC2.0 service

From October 2014 installed ITS spots and on-board devices have been used to provide "ETC2.0", a new service, in addition to conventional automatic toll payment service, that provides driving support, etc., to drivers on expressways.

ETC2.0 is an information service which provides traffic jam avoidance support (by providing supplemantal visual images of traffic conditions ahead of drivers, and real-time, wide-area, accurate traffic jam information), safe driving support (by providing information on items which have fallen on roads, information on traffic jam tail ends, and information on hazards, such as still photos of weather conditions, etc.), and disaster support information (by providing appropriate information to users in the event of route closure). The route information obtained via ETC2.0 will also be used in new services, such as preferential treatment for drivers choosing routes which avoid traffic jams, etc., and operation and management support for commercial vehicles. Furthermore, consideration is also being given to the deployment of private sector services such as private parking lot payment and drive-through payment.

■Guideline for the creation of safe and comfortable bicycle use environments

Bicycles play an important role as familiar and easy to use means of transportation, but bicycle accidents are accounting for a growing share of overall traffic accidents. As health and environmental awareness grows, usage needs for bicycles are on the rise.

In 2007 the MLIT collaborated with the NPA on efforts for creating bicycle usage environments, designating 98 areas across Japan as "bicycle traffic environment model areas in order to further develop and maintain bicycle paths and dedicated bicycle lanes. In 2011 the MLIT collaborated with the NPA, holding exploratory committee meetings led by experts. In April 2012 the committee issued a recommendation for the prompt creation of guidelines across Japan focusing on both physical infrastructure and policies.

Based on this recommendation, in November 2012 the Japanese government formulated guidelines to assist road management authorities and prefectural police departments in creating and implementing bicycle network plans and thoroughly enforcing bicycle traffic rules. Furthermore, recommendations were summarized in December 2015 in preparation for the early formulation of the bicycle network plan and the early securing of safe bicycle traffic spaces.

The Act on Advancement of Integration and Streamlining of Distribution Business

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Eco-Mo Foundation

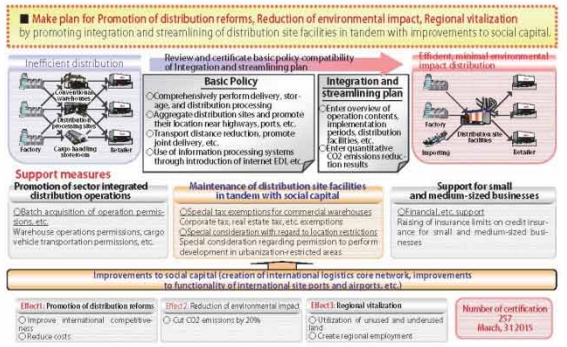
- **Make plan for Promotion of distribution reforms, Reduction of environmental impact, Regional vitalization**

  Maintenance of distribution site facilities in tandem with social capital

  Number of certification : 257 (March, 31 2015)

○The Act on Advancement of Integration and Streamlining of Distribution Business

For freight distribution, which is the backbone of economic activity, it is becoming increasingly important to achieve greater international competitiveness through cost reductions, to provide services which meet the needs of increasingly diverse customers, and to create environmentally conscious distribution systems which help prevent global warming. Distribution must appropriately respond to changing social and economic conditions.



Source: MLIT (Tentative Translated by Eco-Mo Foundation)

To promote the integration and streamlining of distribution operations, the Act on Advancement of Integration and Streamlining of Distribution Business was enacted in 2005. This act defines support measures and business plan certification procedures in order to promote the creation of distribution operation streamlining and integration businesses which perform comprehensive, efficient distribution operations such as transportation, storage, handling, and distribution processing, and the creation of distribution facilities which serve as the core of these business activities.

In order to promote the utilization of this act, a system of indicating companies which have received integration and streamlining plan certification (a certification mark system) was established. By the end of March 2015, 257 said plans had been certified. An "Act on Advancement of Integration and Streamlining of Distribution Business / Distribution Business Integration and Streamlining Plan Certification Application Guide" was released, containing explanations of the law, describing the benefits of certification, and providing information on subjects such as certification application procedures, for use by businesses engaged in operation integration and streamlining.

Source: MLIT (Tentative Translated by Eco-Mo Foundation)

Foundation for Promoting Personal Mobility and Ecological Transportation

Promotion of usage of public transportation

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Eco-Mo Foundation

- **Establishment of the Basic Act on Transport Policy**
  - Overview of the Basic Act on Transport Policy
  - Overview of the Basic Plan on Transport Policy
- **Measures for promoting rail use**
  - Arterial railroad, etc. vitalization projects
  - Rail station comprehensive improvement projects
  - City railroad convenience promotion projects
- **Revised Act on Vitalization and Rehabilitation of Local Public Transportation Systems**

⑤Promotion of usage of public transportation

Creating new railroad lines and new transportation systems, and making rail and bus transportation more convenient, contribute a shift in passenger transportation from private cars to public transportation, which has less of an environmental impact. This leads to reductions in automobile CO2 emissions, so various measures are being implemented in order to achieve this shift.

■Establishment of the Basic Act on Transport Policy

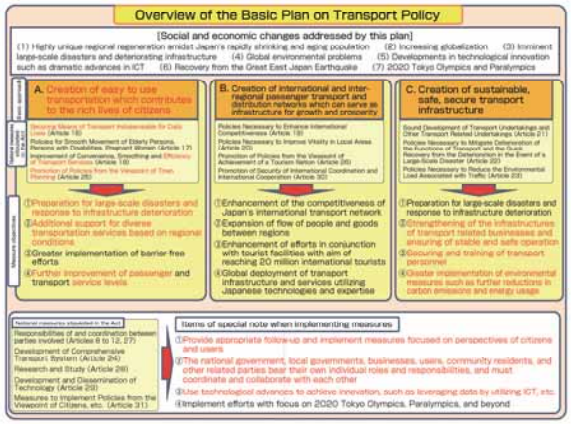
The Basic Act on Transport Policy was enacted on December 4, 2013.

This act defines the basic philosophy underpinning transport related measures in order to promote measures necessary for the national government to coordinate closely with local governments and transport companies in implementing comprehensive and systematic measures from the perspectives of increasing international competitiveness and regional vitality, and ensuring preparedness for large-scale disasters. This act applies to the international transport, national transport, and regional transport which acts as the infrastructure supporting Japan's economic and social activities. The act clearly specifies the responsibilities of involved parties, and mandates that the Cabinet approve a Basic Plan on Transport Policy and present it to the Diet. The Cabinet approved the first Basic Plan on Transport Policy on February 13, 2015.

●Overview of the Basic Act on Transport Policy

Source: MLIT (Tentative Translated by Eco-Mo Foundation)

●Overview of the Basic Plan on Transport Policy



Source: MLIT (Tentative Translated by Eco-Mo Foundation)

Energy Saving Act-based measures

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Eco-Mo Foundation

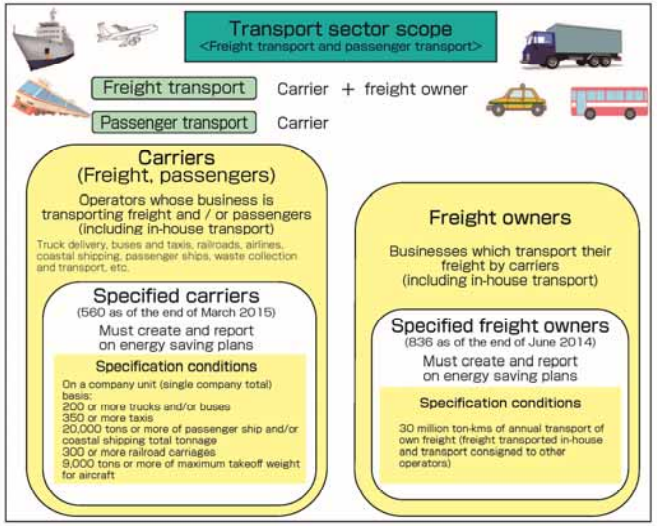
- From a medium- and long-term perspective, each carrier should set as a target an annual reduction of 1% or more in energy consumption rates
- Carrier designation status (total of 560 companies)
  - Freight Railway: 1
  - Freight Commercial trucks: 281
  - Freight Private trucks: 86
  - Freight Shipping: 32
  - Passengers Railway: 26
  - Passengers Buses: 94
  - Passengers Taxis: 26
  - Passengers Shipping:12
  - Aviation: 2

(2) Energy Saving Act-based measures

The steady implementation of energy saving measures is an important challenge in tackling global warming.

The Act on the Rational Use of Energy (the Energy Saving Act) seeks to rationalize the use of energy based on operator's decision criteria defined by the national government. Operators (specified operators) using a specified amount of energy or more are required to report on their energy usage yearly, and formulate plans (medium to long term plan) (3-5 years) for rationalization of energy use. The transport sector was added in the April 2006 revision to the Act.

In order to ensure energy reductions within freight distribution sector, the Act applies not only to carriers but freight owners as well.



Specified carrier designation status (total of 560 companies as of the end of March 2015)

	Freight				Passengers				Aviation	Total
	Railway	Commercial trucks	Private trucks	Shipping	Railway	Buses	Taxis	Shipping		
No. of carriers	1	281	86	32	26	94	26	12	2	560

Implementation of the transport business Green Management Certification System

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Eco-Mo Foundation

- The Green Management Promotion Manual contains specific measures for individual environmental conservation items, based on the concepts of ISO14031
- They make it easy to establish targets and carry out evaluations, which in turn make it easy to implement environmental management on an ongoing basis

(4) Measures by the Eco-Mo Foundation

①Implementation of the transport business Green Management (low environmental impact business management) Certification System

The Green Management Certification System, which objectively certifies the efforts of companies to make environmental improvements, strives to encourage companies to engage in environmental efforts, and contributes to reductions in the environmental impact of industry by fostering understanding and cooperation between certified companies, society, and users. The system, with the Eco-Mo Foundation as its certifying body, certifies and register transport operators whose environmental activities meet or exceed levels defined in the Green Management Promotion Manual*. The system was launched for the truck industry in October 2003, for the bus and taxi industry in April 2004, and for the passenger ship, coastal shipping, port transport, and warehouse industries in July 2005. As of the end of 2015 there are 3,669 certified businesses and 7,234 certified business sites. These are indicated as "Environmentally-friendly transport operators" on the Eco-Mo Foundation website, and each month press releases are issued to newspaper companies containing newly certified businesses. Vehicles owned by certified truck, bus, and taxi operators account for between 12.4% and 16.5% of the vehicles owned by companies within Japan.

※The Green Management Promotion Manual contains specific measures for individual environmental conservation items, based on the concepts of ISO14031 (an international standard for environmental performance evaluation). They make it easy to establish targets and carry out evaluations, which in turn make it easy to implement environmental management on an ongoing basis.

●Number of vehicles owned

	Certified Companies as of December 31, 2014	Companies Nationwide	Percentage Owned by Certified Companies	Notes
Trucks	151,413	1,224,608 (Note 1)	12.4%	(Note 1): Number of vehicles owned as of the end of March 2014. This includes the number of commercial trucks (excluding trailers) and the number of commercial special purpose vehicles as indicated in the "Transportation Statistics Collection" (from the MLIT). It does not include the number of registered light trucks.
Buses	17,692	107,241 (Note 2)	16.5%	(Note 2): Number of vehicles owned as of the end of March 2014. Based on the "Transportation Statistics Collection" (MLIT).
Taxis	33,170	203,943 (Note 3)	16.3%	(Note 3): Number of corporate taxis owned as of the end of March 2013. Based on information on the Japan Federation of Hire-Taxi Associations website

Implementation of the Excellent Eco-Commuting Business Site Certification System

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Eco-Mo Foundation

- The Excellent Eco-Commuting Business Site Certification System has been implemented since June 2009
- 647 business sites have been certified
  (By the end of December 2015)
- In 2015 Toyota City and Toyooka City was selected as the winner of the MLIT awards

○Certification acquisition subsidy systems

Local governments:

10 organizations (Chuo-ku, Tokyo; Katsushika-ku, Tokyo; Sumida-ku, Tokyo; Shinjuku-ku, Tokyo; Matsudo City, Chiba Prefecture; Yokohama City, Kanagawa Prefecture; Shiojiri City, Nagano Prefecture; Ina City, Nagano Prefecture; Kameyama City, Mie Prefecture; Fukuyama City, Hiroshima Prefecture)

Industry groups:

Japan Association of Refrigerated Warehouses and 38 prefectural Trucking Association
(Hokkaido, Aomori Prefecture, Iwate Prefecture, Akita Prefecture, Fukushima Prefecture, Ibaraki Prefecture, Tochigi Prefecture, Gunma Prefecture, Saitama Prefecture, Chiba Prefecture, Tokyo Metropolis, Kanagawa Prefecture, Niigata Prefecture, Yamanashi Prefecture, Nagano Prefecture, Fukui Prefecture, Gifu Prefecture, Shizuoka Prefecture, Aichi Prefecture, Mie Prefecture, Shiga Prefecture, Osaka Prefecture, Hyogo Prefecture, Nara Prefecture, Wakayama Prefecture, Tottori Prefecture, Okayama Prefecture, Hiroshima Prefecture, Tokushima Prefecture, Kagawa Prefecture, Ehime Prefecture, Kochi Prefecture, Fukuoka Prefecture, Nagasaki Prefecture, Kumamoto Prefecture, Oita Prefecture, Miyazaki Prefecture, Kagoshima Prefecture)

②Implementation of the Excellent Eco-Commuting Business Site Certification System

The Excellent Eco-Commuting Business Site Certification System has been implemented since June 2009 to certify business sites which actively promote eco-commuting, widely sharing information on their efforts in order to promote greater adoption of eco-commuting.

The Conference on Promotion of Public Transportation, consist of various transport operator organizations, economic organizations, related government bureaus, and other organizations, acts as its certification body. The MLIT and the Eco-Mo Foundation jointly operate the certification system as the secretariat. By the end of December 2015 647 business sites have been certified.

Certified business sites implementing Best measures may also be recommended for MLIT awards. In 2015 Toyota City and Toyooka City was selected as the winner of the "2015Minister's Award for Excellent Business Implementing Traffic-Related Environmental Conservation Efforts"

●Measures implemented by Toyota City, Aichi Prefecture and Toyooka City Hyougo Prefecture

Promotion of eco-driving

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Eco-Mo Foundation

- **Truck eco-driving training certification and passenger vehicle eco-driving training**
  - **Accumulated number of completed certificates issued(2014)**
    - **Passenger vehicle: 10,993**
    - **Truck: 129,882**
- **It has also held the "Eco-Drive Activity Contest" with the support of the Eco-Drive Promotion Liaison Committee and the Eco-Drive Promotion Implementation Council**

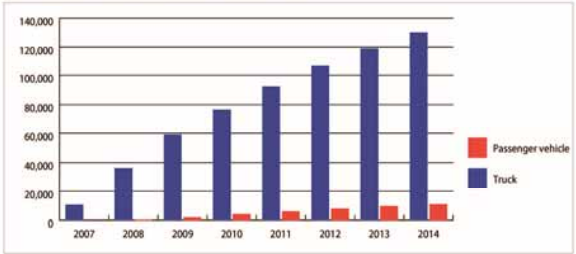
Ⅲ. Measures in Response to Major Environmental Problems of the Transport Sector

③Promotion of eco-driving

The Eco-Mo Foundation acts as the secretariat of the Eco-Drive Promotion Implementation Council (consist of 16 transport related organizations), established based on the results of the "COP3 to the UNFCCC" held in Kyoto in 1997. It also carried out various unique eco-driving promotion activities. Since April 2007 it has offered truck eco-driving training certification, and then passenger vehicle eco-driving training from September 2008, and presents students who have successfully completed training at certified organizations with completion certificates.

Since 2011 it has also held the "Eco-Drive Activity Contest" with the support of the Eco-Drive Promotion Liaison Committee (consist of the NPA, METI, MLIT, and MOE) and the Eco-Drive Promotion Implementation Council. Since 2014 Minister of Land, Infrastructure, Transport and Tourism Award (transportation business category) and Minister of the Environment Award (general category) have been conferred, and the award ceremony for top winners was held as part of the "2015 Eco-Drive Symposium" on November 17.

●Accumulated number of completed certificates issued



●2015 Eco-Drive Activity Contest award ceremony

●Contest leaflet

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Promotion of Environmentally Sustainable Transport (EST)

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Eco-Mo Foundation

●7th EST Traffic Environment Award

［Grand Prize］

Sendai City(MLIT Award)

Nankai Electric Railway Co., Ltd.(MOE Award)

［Outstanding Performance Award］

Keisei Bus Co., Ltd.

［Incentive Award］

Hadano City

Ise City, which is utilizing electric vehicles, etc. Low Carbon Society Creation Council

Foundation for Promoting Personal Mobility and Ecological Transportation

④Promotion of Environmentally Sustainable Transport (EST)

The OECD has proposed Environmentally Sustainable Transport (EST) (see page 41), and organizations such as Japan's MLIT have implemented EST model projects. In order to achieve greater use of EST by local governments and transport operators, since 2006 the Eco-Mo Foundation has worked with academic experts, related groups, EST related ministries and agencies, and other organizations to promote EST.

In 2015 the Eco-Mo Foundation collaborated with the Regional Transport Bureau in holding workshops for local governments and transport operators (EST Emergence Seminars) in Sapporo City, Toyohashi City, and Sakai City. In addition to these workshops, tours and review sessions were also held as part of a three day personnel development training session (the 5th such session) in Fujisawa City. The 7th EST transport Environment Awards, recognizing exceptional regional transport environment efforts, were also held. In 2015 Sendai City received the MLIT Award, and Nankai Electric Railway received the MOE Award. The awards ceremony was held as a part of the 9th EST Promotion Forum, a symposium, in Tokyo, and the awards were also publicized on the EST portal site (http://www.estfukyu.jp/), email newsletters, and Twitter (https://twitter.com/#!/officeEST).

●7th EST Traffic Environment Award results

Award	Recipient	Name of Main Project
Grand Prize	[Minister of Land, Infrastructure, Transport and Tourism Award] ○Sendai City	Public Transportation Promotion Initiatives aimed at reduction of environmental impact in Sendai City
Grand Prize	[Minister of the Environment Award] ○Nankai Electric Railway Co., Ltd.	Nankai Electric Railway Medium-Term Environmental Targets
Outstanding Performance Award	○Keisei Bus Co., Ltd.	Keisei Bus' "3S Movement"
Incentive Award	○Hadano City	Hadano transportation streamlining initiative
Incentive Award	○Ise City, which is utilizing electric vehicles, etc. Low Carbon Society Creation Council	Okagesama Action! - For residents and visitors -

●Award-winners Sendai Subway Tozai Line and Nankai Electric Railway 8300 series train

Promotion of mobility management education (transport environment education)

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Eco-Mo Foundation

- **Publishes educational manifestos to serve as guidelines, publishes textbooks, and engages in other education promotion activities**
- **Supported local governments**
  Obihiro City, Fujisawa City, Kyoto City
- **Supported schools**
  Matsushima Elementary School, Naha City, Okinawa Prefecture etc.

Ⅲ. Measures in Response to Major Environmental Problems of the Transport Sector

⑤Promotion of mobility management education (transport environment education)

In order to promote transport environment education, the Eco-Mo Foundation provides support to local governments and elementary and junior high schools, creates centers for ongoing education, publishes educational manifestos to serve as guidelines, publishes textbooks, and engages in other education promotion activities.

Since 2015 educational support has been offered to the local governments of Kyoto City, Kyoto Prfecture. Support was provided to three groups, including Obihiro City and Fujisawa City, which have been provided support since 2014.

<Measures by supported local governments>

Obihiro City:

Alongside the workshops provided in the past, new programs tied to coursework and easy for educators to implement were considered and developed.

Fujisawa City:

In addition to the two year educational programs for 5th and 6th graders considered in 2014, short-term programs were also considered and implemented.

Kyoto City:

Alongside the unique city programs which were developed, new programs tied to coursework and easy for educators to implement were considered and developed.

Fujisawa City

Kyoto City

In 2015 support has also been provided to the following three elementary schools.

●Names of supported schools and educational themes

Name of School	Theme	Subject	Hours	Student Grade
Matsushima Elementary School, Naha City, Okinawa Prefecture	Let's learn about the allure of "Yui Rail," the monorail we all know and love	Social Studies	3 classes	4th graders
Kanazawa University Affiliated Scool for Special Needs Education	Interchange between special needs school and industrial high school, and joint education regarding public traffic environment in communities with children with intellectual disabilities		10 classes	3rd to 6th graders
Midoridai Elementary School, Kawanishi City, Hyogo Prefecture	Our Kawanishi (examination of public transportation, the environment, and transportation town planning)	Life Environment studies	3 classes	2nd graders

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Eco-Products 2015 Exhibition and 12th Eco-Products Awards

Eco-Mo Foundation

- **Eco-Products 2015 Exhibition**
  Eco-Mo Foundation booth visitors: Approx. 4,000
- **12th Eco-Products Awards**
  NYK and MTI won the product category MLIT Award for its Ship Information Management System(SIMS)
  The winners were presented with their awards at the Eco-Products 2015 Exhibition

⑥Eco-Products 2015 Exhibition

The Eco-Products Exhibition, held annually since 1999 in order to promote environmentally-friendly products and services, is a comprehensive environmental exhibition held at Tokyo Big Sight. It is one of the largest-scale exhibitions in Japan, attended by business persons, members of the government, and general consumers.

The Eco-Mo Foundation has operated booths at the exhibition featuring videos and panels explaining the current state of the global warming issues related to the transport sector, global warming countermeasures, and the activities of the foundation.

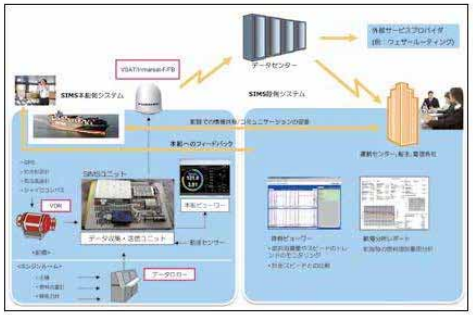
(Eco-Products 2015 data: Exhibitors: 702 companies and organizations. Visitors: Approx. 170,000. Eco-Mo Foundation booth visitors: Approx. 4,000)

⑦12th Eco-Products Awards

The Eco-Products Awards are held by the Eco-Products Awards Promotion Council (consist of Global Environmental Forum, Japan Environmental Management Association for Industry, Eco-Mo Foundation, and Japan Organics Recycling Association). It was established in order to encourage the spread of eco-friendly products by awarding excellent products and services reduced environmental load.

In 2015 NYK .etc won the product category Minister of Land, Infrastructure, Transport and Tourism Award for its Ship Information Management System(SIMS). The winners were presented with their awards at the Eco-Products 2015 Exhibition, held in December.

● 12th Minister of Land, Infrastructure, Transport and Tourism Award Ship Information Management System(SIMS)



Promotion of usage of carbon offsets in the transportation and tourism sectors

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Eco-Mo Foundation

●Example of carbon offsets using the support systems [Environmentally-friendly taxi stand]

A taxi stand exclusively for taxis from Kokusai Motorcars, part of the km Group, was set up at the main Isetan location in Shinjuku, and the CO_2 emissions for the base fare distance (2km) of each taxi trip departing from the taxi stand was offset by the company.

Foundation for Promoting Personal Mobility and Ecological Transportation

Ⅲ. Measures in Response to Major Environmental Problems of the Transport Sector

⑧Promotion of usage of carbon offsets in the transportation and tourism sectors

One global warming countermeasure is the use of "carbon offsets", which eliminate or absorb greenhouse gasses to compensate for emissions made elsewhere as the result of the usage of products or services. Product or service users or providers bear the costs of purchasing emissions rights produced elsewhere to compensate for their emissions. In the transport and transportation sector, carbon offsets are already being used by airlines, rail operators, bus operators, taxi operators, truck operators, and travel companies.

Carbon offsets don't only highlight the efforts being made by the companies which use them to prevent global warming, but they can also promote voluntary greenhouse gas reductions across a wide spectrum of users, including individuals. They also serve to provide funding to projects for reducing or absorbing greenhouse gasses.

In order to promote greater usage of carbon offsets by the transportation and tourism sector, in December 2009 the Eco-Mo Foundation established the "Transportation and Tourism Carbon Offset Support System." This system reduces the burden placed on companies in introducing carbon offsets for transport and tourism related services, and makes it possible to calculate CO2 emissions and purchase emissions rights via the web. The system is already being used by local government transportation bureaus and a wide range of companies, including major private rail operators, bus companies, taxi companies, truck companies, and tourism companies.

●Example of carbon offsets using the support systems

Implementing company: Kokusai Motorcars
Name: Environmentally-friendly taxi stand
Overview: A taxi stand exclusively for taxis from Kokusai Motorcars, part of the km Group, was set up at the main Isetan location in Shinjuku, and the CO2 emissions for the base fare distance (2km) of each taxi trip departing from the taxi stand was offset by the company

Taxi stand

Leaflet

Eco-Mo Foundation

Thank you

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