

Environmental approaches of Logistic companies in Japan



Improving management with an environment CSR

GREEN·ECO PROJECT

Tokyo Trucking Association

Table of Contents

1. Logistics Industry in Japan

- ① Automobile ownership in Japan
- ② Environmental regulations
- ③ Environmental regulations in Tokyo
- ④ The sky in Tokyo
- ⑤ The Revised Energy Conservation Law

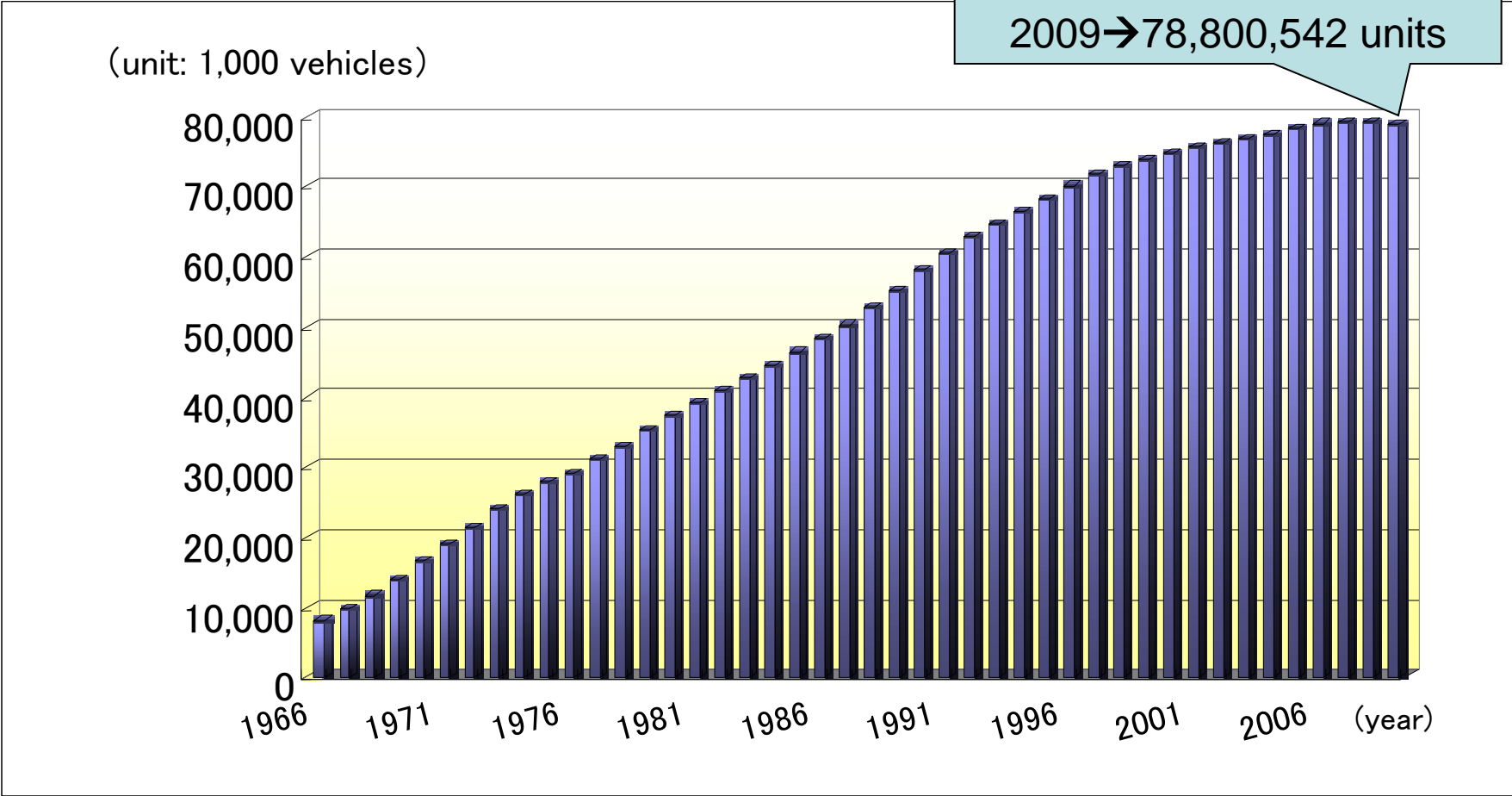
2. Green-Eco Project

- ① Concept
- ② Simple educational technique
- ③ Achievements
- ④ Future prospects
- ⑤ Summary

1. Logistics Industry in Japan

① Automobile ownership in Japan

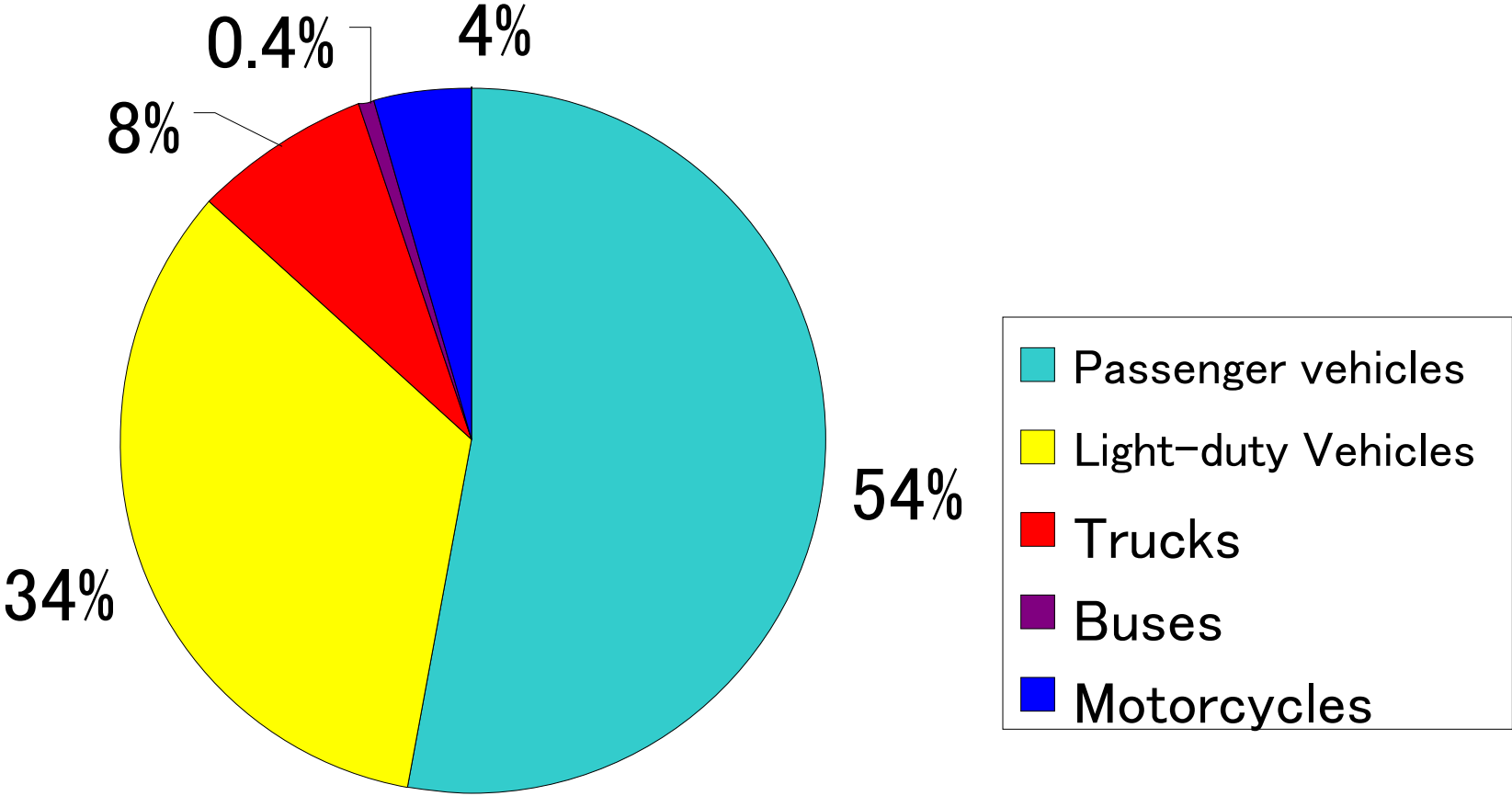
Change in the number of vehicles owned in Japan



1. Logistics Industry in Japan

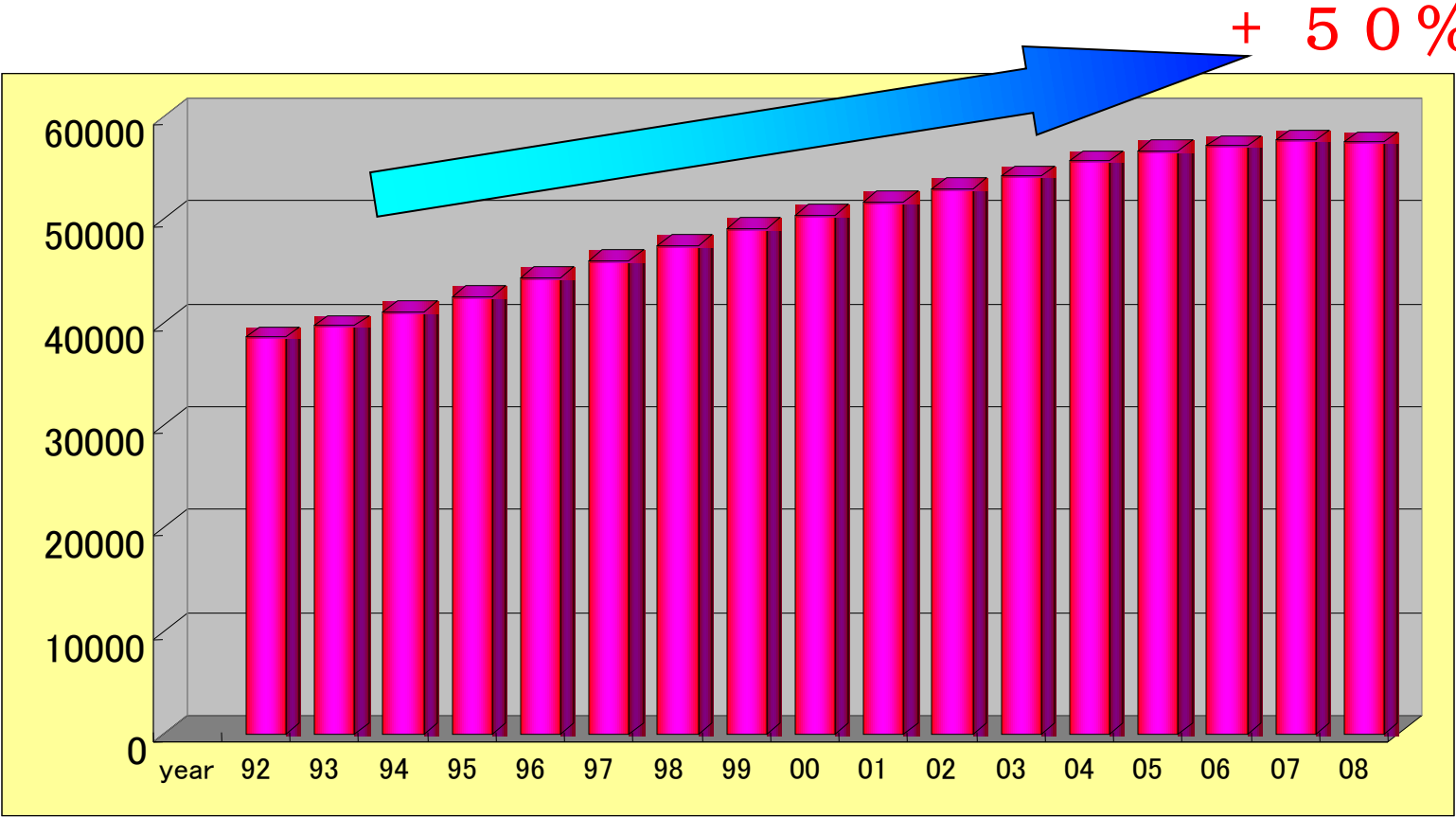
① Automobile ownership in Japan

Number of vehicles owned in Japan (Total: 78,881,790) (As of April, 2010)



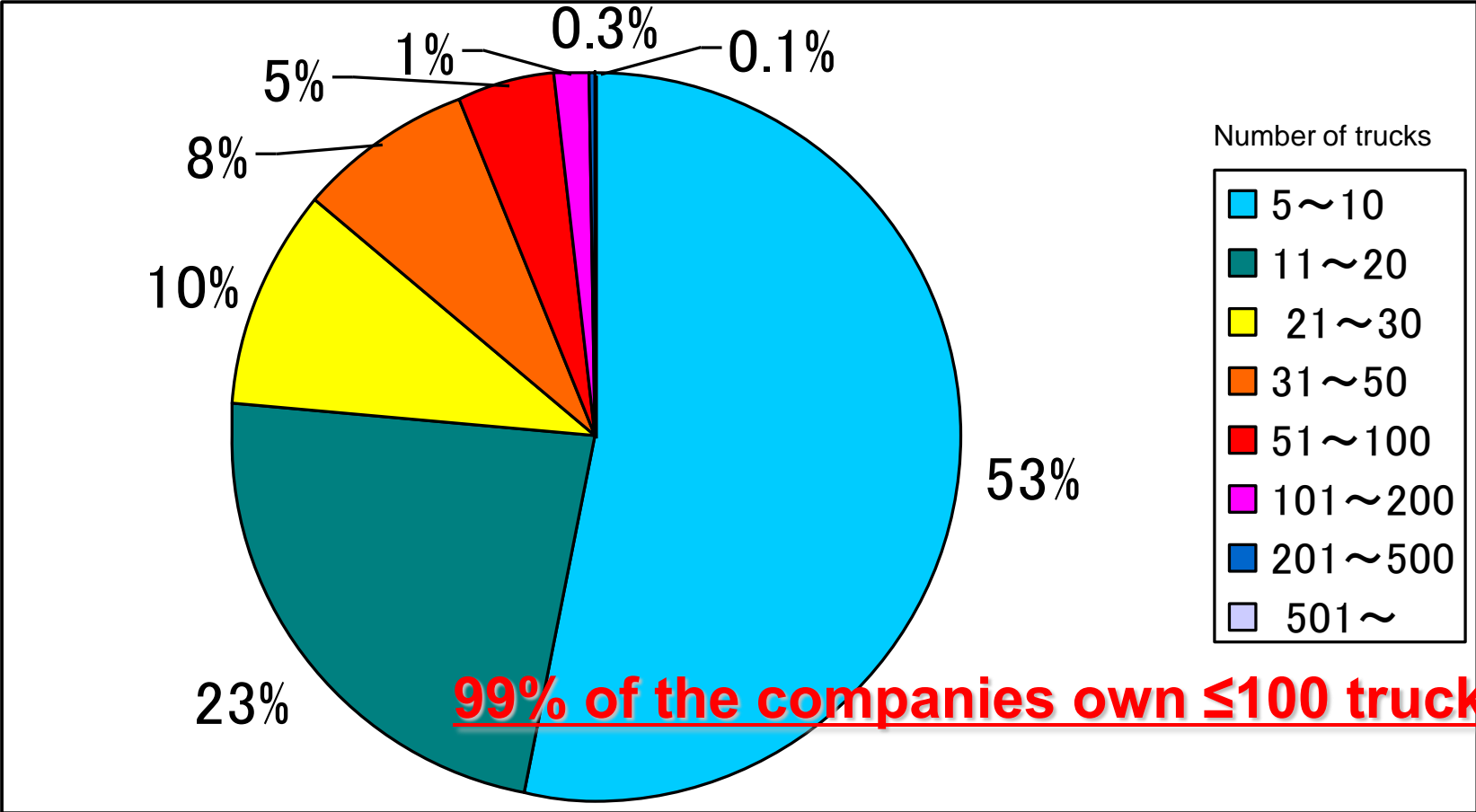
1. Logistics Industry in Japan

Stronger competition due to increasing number of newcomers



1. Logistics Industry in Japan

Number of trucks owned by a logistics company



1. Logistics Industry in Japan

② Environmental regulations for diesel engines

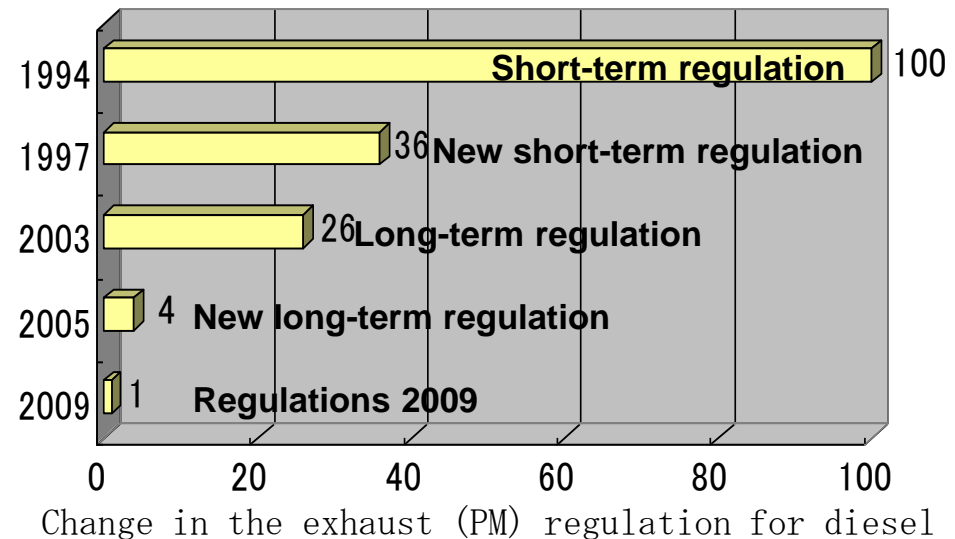
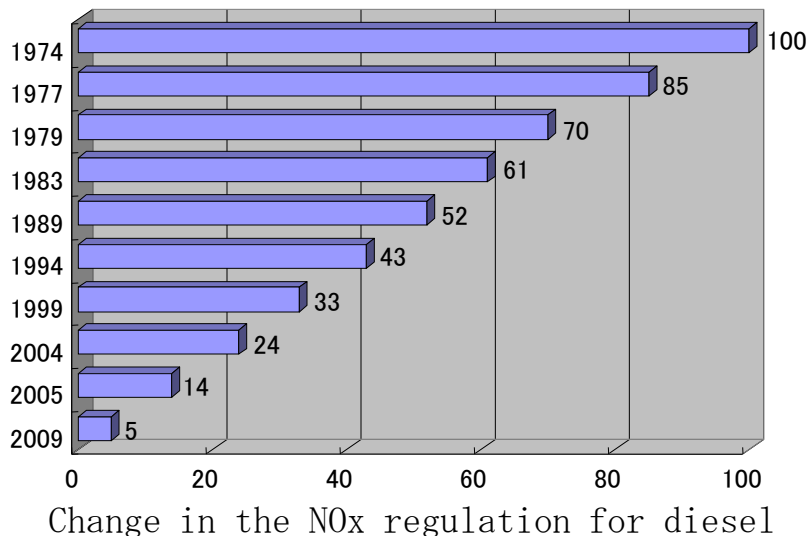
• NOx and PM Law

1992 : Automobile NOx Law

2001 : Revised Automobile NOx Law into the NOx and PM Law
Regulations for vehicle categories in metropolitan areas

2003 : Regulation started

Large-sized trucks (more than 9yrs old) and small-sized trucks (more than 8yrs old) are NOT allowed on the road regardless of their odometer readings.



1. Logistics Industry in Japan

③ Environmental regulations in Tokyo

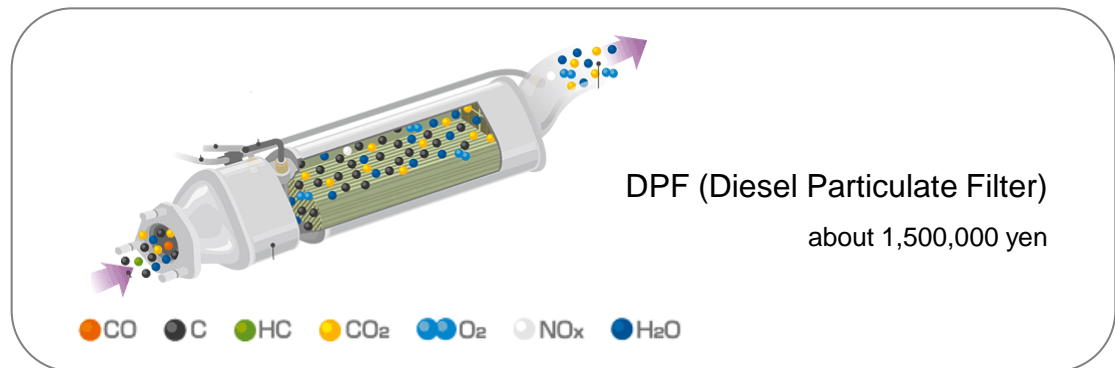
Tokyo Metropolitan Ordinance on Environmental Preservation:

Regulation started (2003)

A vehicle older than **7 years** must either install DPF (Diesel Particulate Filter) or purchase a new vehicle; otherwise, the vehicle is not allowed to be driven in Tokyo.

Penal provisions

Total prohibition of vehicle operation ordered to the operation manager. Not complying with the penalty results in releasing the name to the public as well as a fine under 500,000 JPY.



Achievement of the compliance standard (2005)

Tokyo conducted survey in 2002 to find that PM regulation standard was not cleared in over 40% areas.

1. Logistics Industry in Japan

④ The sky in Tokyo



1970's

1. Logistics Industry in Japan

④ The sky in Tokyo

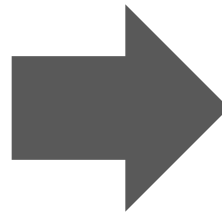


As a result of strict regulations, the sky of Tokyo cleared up.

1. Logistics Industry in Japan

Strict regulations came with a heavy price for small / medium scale transportation (trucking) companies.

Year 2003	
Number of members	4,300 companies
Vehicle ownership	100,000 trucks



Present general members	
Number of members	3,686 companies
Vehicle ownership	80,000 trucks

As of June 30, 2010

1. Logistics Industry in Japan

⑤ The Revised Energy Conservation Law

1979: Enactment of the Law Concerning the Rational Use of Energy (Energy Conservation Law)

1993: Enactment of the Energy-saving and recycling Law

1998: Revised Energy Conservation Law—Adoption of the top runner system.

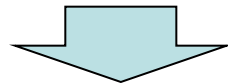
2002: Revised Energy Conservation Law---Expanding the range of designated factories; reinforcement to the public welfare and the operation sectors.

2005 : Revised Energy Conservation Law— Measures against shippers and the transportation industries.

【Points of revision】

- I . Obligation for logistic companies to submit energy-saving plan and energy consumption report regularly (for companies over a certain size).
- II . Obligation for shippers to submit energy-saving plan and energy consumption report regularly (for shippers over a certain size).
- III . Mandate efforts to companies, such as promotion of public transportations, as a measure against private vehicle use.

However, the trucking industry didn't maintain the database for fuel efficiencies. (99% was medium and small scale truck companies)



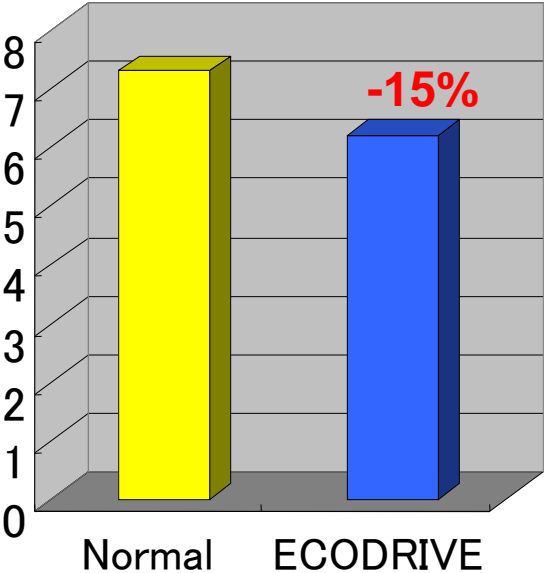
Establishment of the Green-Eco Project

2.Green-Eco Project

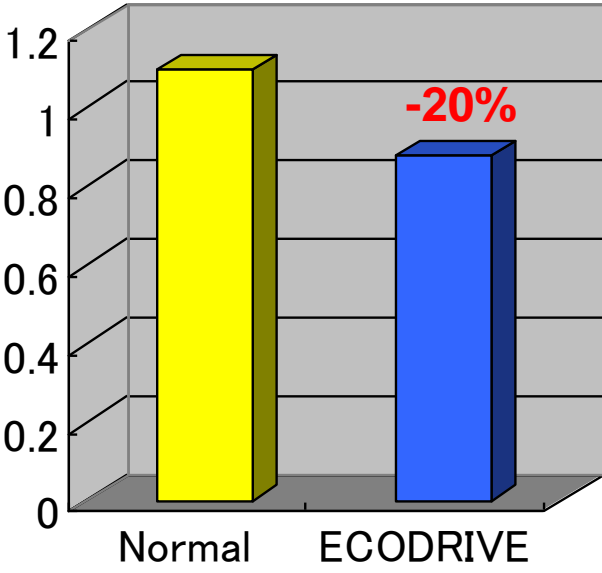
Eco-driving(environmentally friendly driving) will lead to reductions in NOx and CO2 emissions

※In 2006 KAWASAKI city, atmospheric environmental improvement measures examination investigation

Amount of NOx emitted (g/km)



Amount of CO2 emitted (kg/km)



2.Green-Eco Project



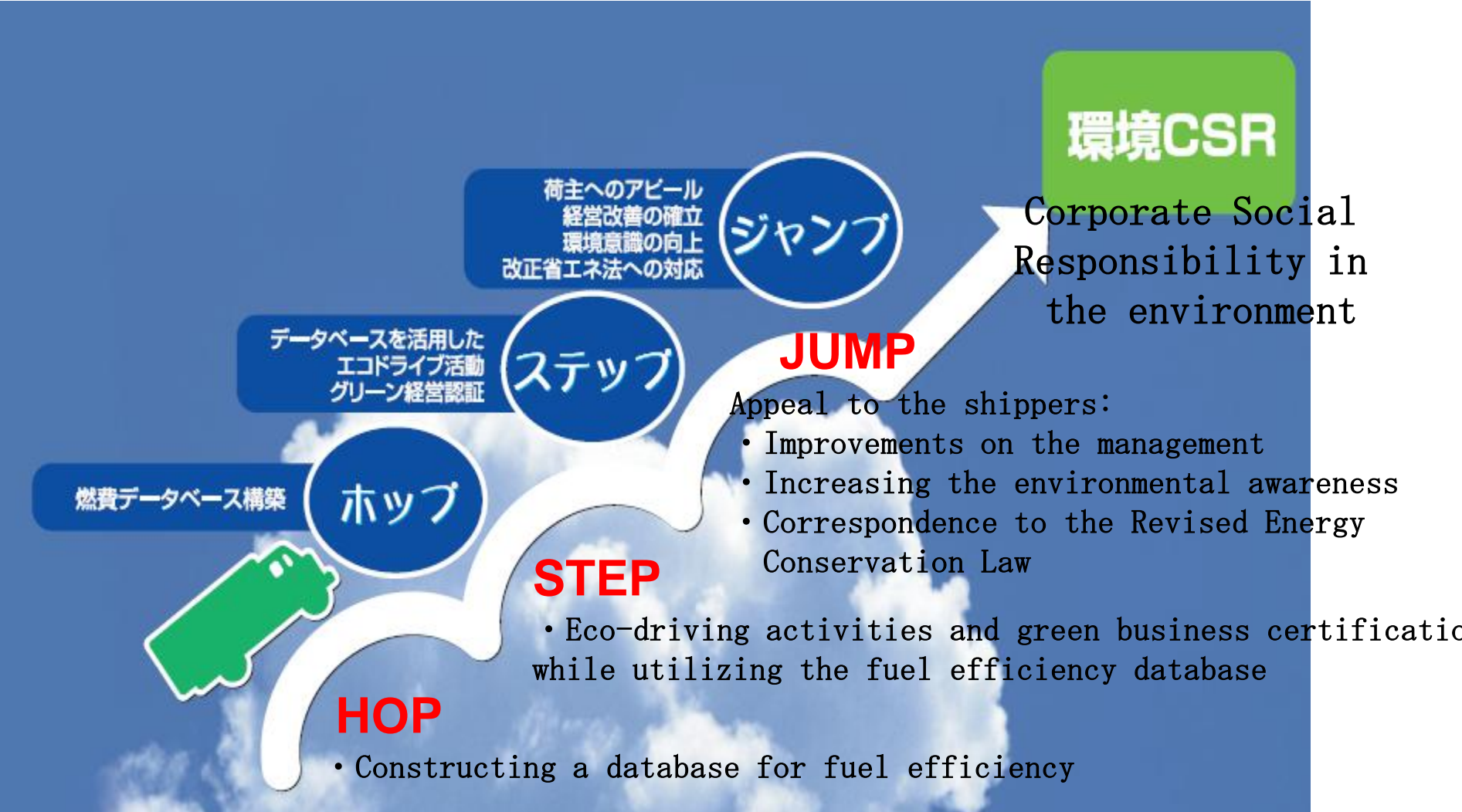
Improving management with an environment CSR

GREEN•ECO PROJECT

Tokyo Trucking Association

2.Green-Eco Project

① Concept



2.Green-Eco Project

① Practical tools for the Project



A poster

Have us for the future

CO2 emission control



Sticker

Green-Eco project



For professional drivers

日付	出発時刻	到着時刻	走行距離	燃料消費量	燃費
10/1	08:00	18:00	100km	10L	10km/L
10/2	08:00	18:00	120km	12L	10km/L
10/3	08:00	18:00	110km	11L	10km/L
10/4	08:00	18:00	130km	13L	10km/L
10/5	08:00	18:00	140km	14L	10km/L
10/6	08:00	18:00	150km	15L	10km/L
10/7	08:00	18:00	160km	16L	10km/L
10/8	08:00	18:00	170km	17L	10km/L
10/9	08:00	18:00	180km	18L	10km/L
10/10	08:00	18:00	190km	19L	10km/L

Pencil

A handwriting input by the driver

Improved fuel efficiency

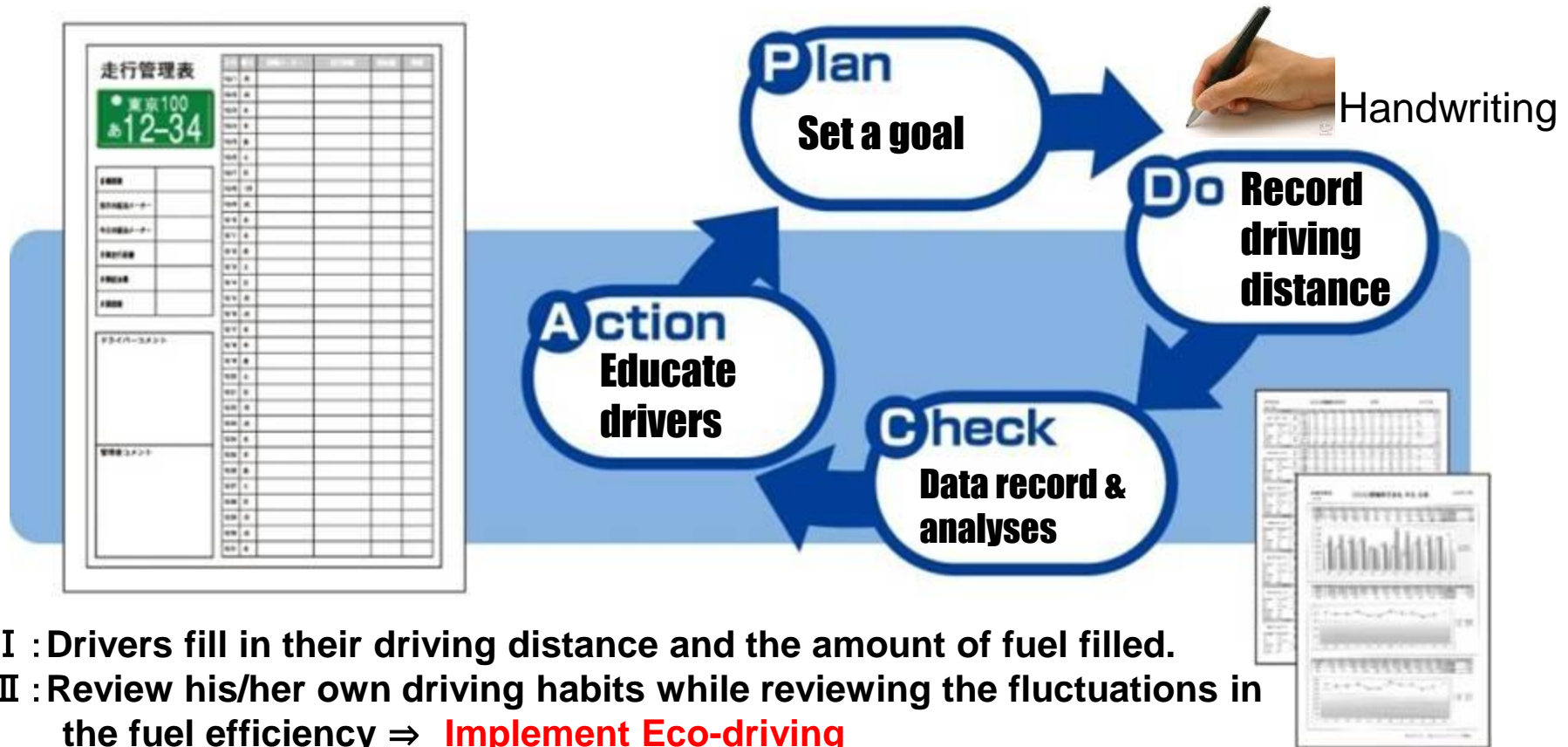


Recognition of the effect



2.Green-Eco Project

② Simple educational technique



I : Drivers fill in their driving distance and the amount of fuel filled.

II : Review his/her own driving habits while reviewing the fluctuations in the fuel efficiency ⇒ **Implement Eco-driving**

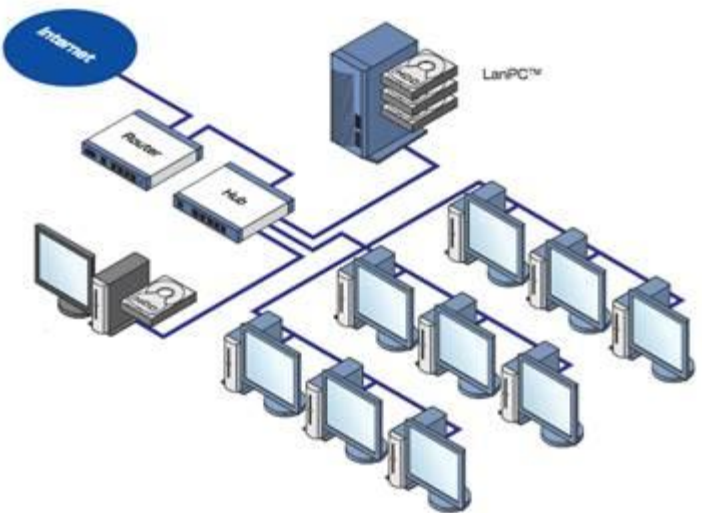
III : Results are analyzed and feedback is given to the drivers

IV : Recognition of superior drivers

V : Set a next goal

2.Green-Eco Project

② Simple educational technique

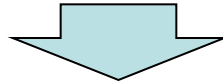


Eco-Drive Professional Company
ASUA Corporation

2.Green-Eco Project

② Simple educational technique

Another important point



Preparation of the promotion system by managers and administrators

In order to make continuous achievements, it is important to prepare a good promotion system on managers' and administrators' side.

2.Green-Eco Project

② Simple educational technique

A discussion-style seminars for managers

(3 basic chapters / 4 application chapters / 7 seminars in total)

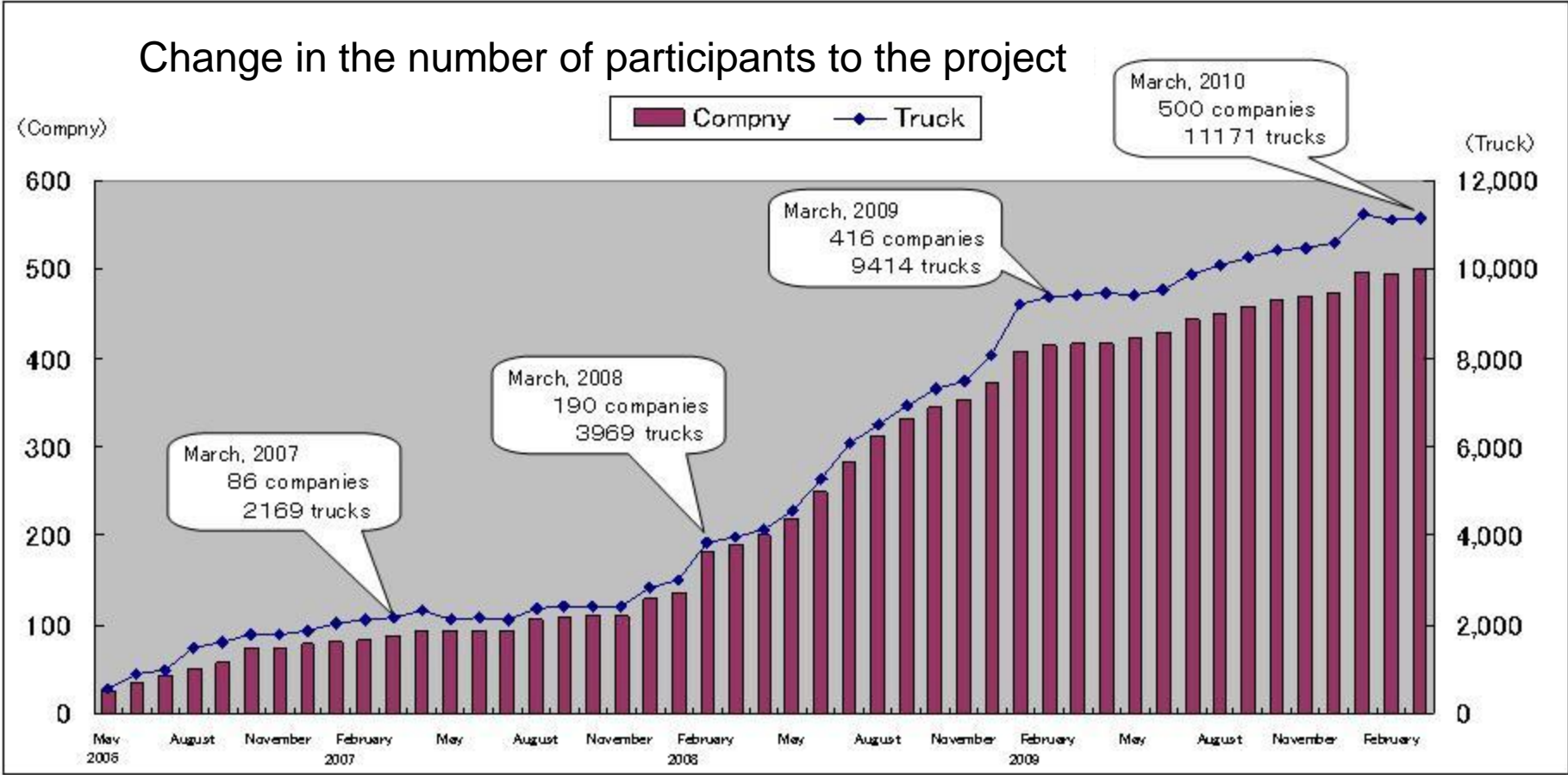


Seminar contents:

1. Outline of the project
2. Forming a system and an implementation method
3. Effective techniques
4. Practical use of the drive recorder
5. Green management certification
6. Correspondence with shippers
7. Further improvements

2.Green-Eco Project

③ Achievements of the Project



11,171 trucks and 500 companies participated in the project as of March, 2010

2.Green-Eco Project

③ Achievements of the Project

Reduction in the Fuel Consumptions

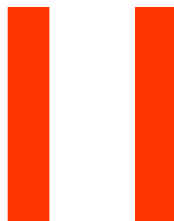
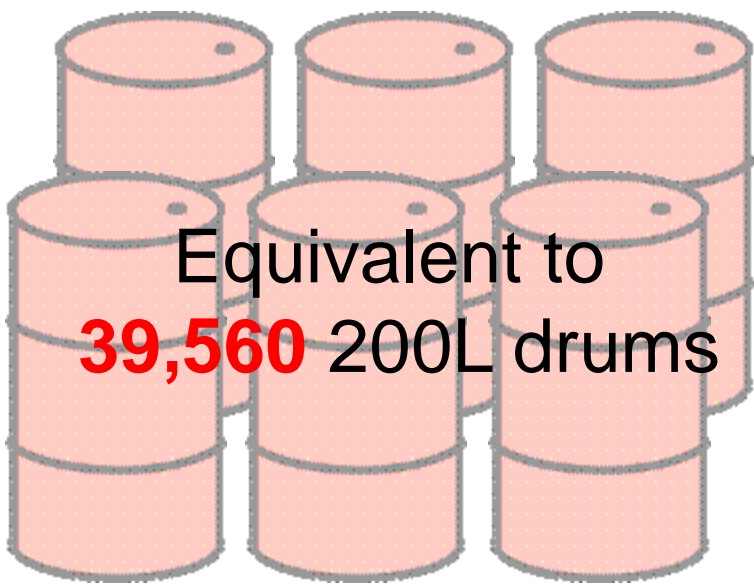
	Amount reduced (ℓ)	Amount reduced (bbl)
2006	735,371	4,625
2007	2,119,509	13,330
2008	2,023,494	12,726
2009	3,033,837	19,081
Total	7,912,211	49,762

Total amount of fuel reduced	7,912kℓ	49kbbl
------------------------------	---------	--------

2.Green-Eco Project

③ Achievements of the project

Total amount of fuel reduced (kl)	7,912kl
-----------------------------------	---------



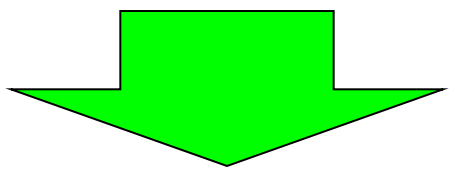
495 tankers

2.Green-Eco Project

③ Achievements of the project

**Total amount of fuel
reduced**

7,912 kl



Cost reduction	886.17million yen
-----------------------	--------------------------

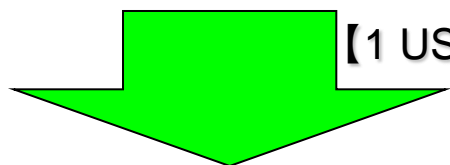
2.Green-Eco Project

③ Achievements of the project

In US Dollars:

(Average fuel cost in Japan is
112yen/liter
as of April 10, 2010)

**Total amount of fuel
reduction 7,912 kl**

 **[1 US\$ = 93 JPY]**



Cost reduction	9.53 million US \$
-----------------------	---------------------------

2.Green-Eco Project

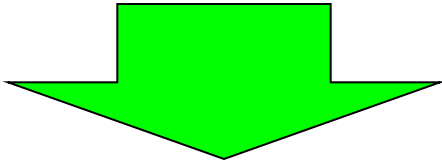
③ Achievements of the project

Total fuel reduction
7,912 kl

Equivalent to
1,480,700 cedar trees
forested



Converting to the Carbon dioxide equivalent



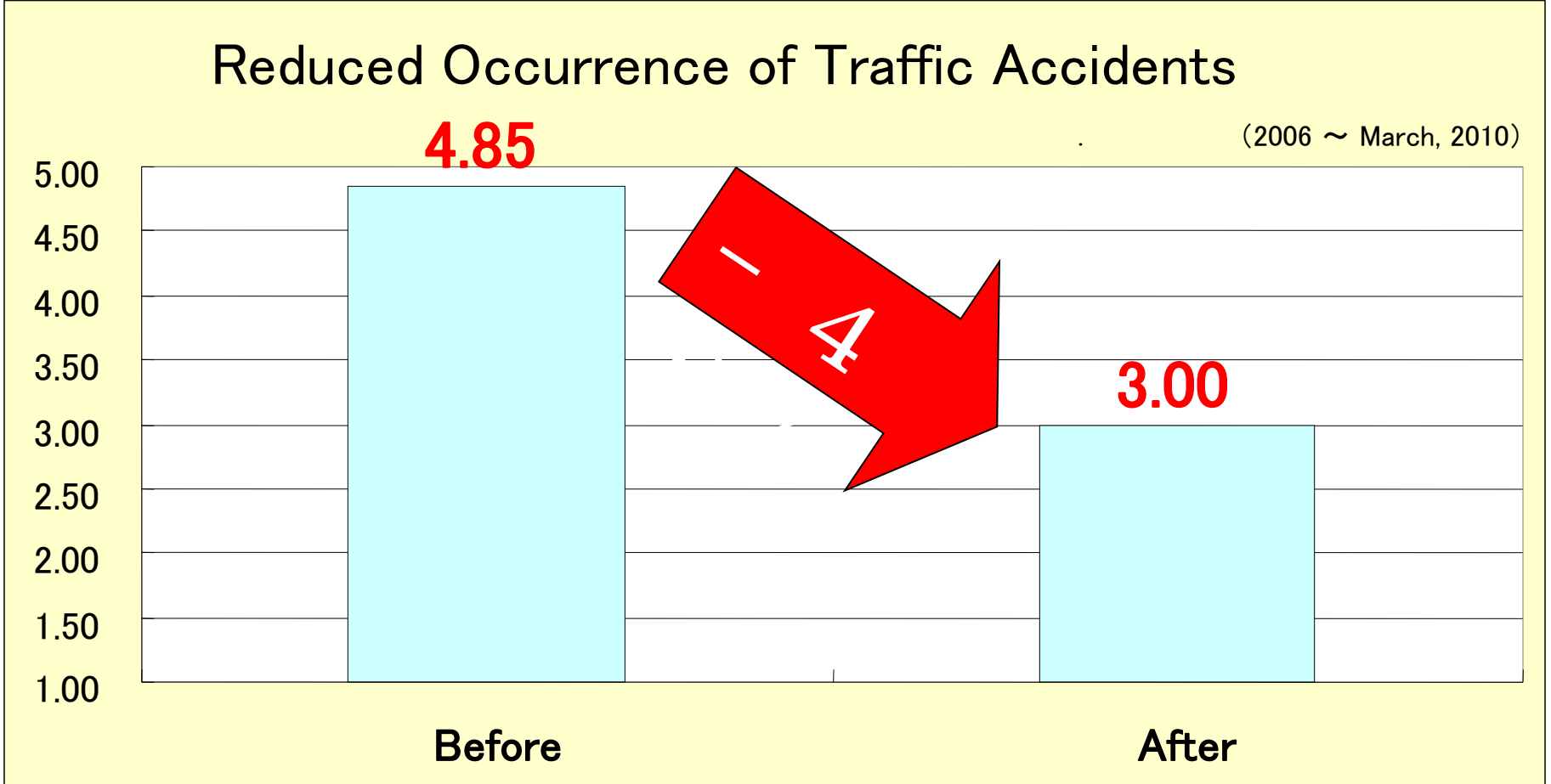
Amount of CO ₂ reduced	20,730 t - C O₂
-----------------------------------	-----------------------------------

※cedar / 14kg / year CO₂ amount of annual absorption

※emission coefficient of CO₂ in gas oil (gas oil × 2.62kg-CO₂/ℓ)

2.Green-Eco Project

③ Achievements of the project



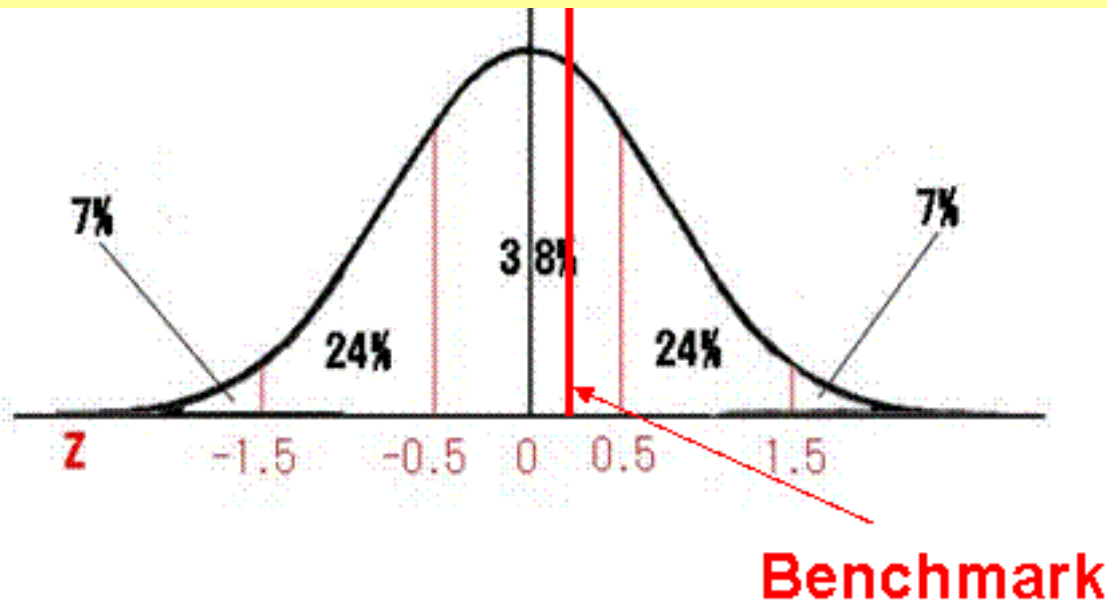
Accident occurrence was reduced by 40% in 4 years

2.Green-Eco Project

④ Future prospects

Benchmarking the truck fuel efficiency

Our future prospect is to benchmark the fuel efficiency database for trucks. The Green-Eco project enables us to make fuel efficiency benchmarks for each type of vehicle.



2.Green Eco Project

⑤ Summary

Japan has a variety of high-end equipments to support the practice of Eco-driving.



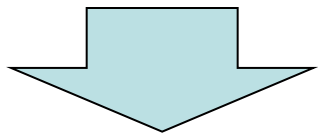
Digital Tachograph



Drive recorder

However . . .

With just a piece of paper, a pencil and right motivation, we can start our own project that helps improve the environment. And that is...



Green-Eco Project

2.Green-Eco Project

⑤ Summary

■ Advantages of Green-Eco Project

- 1 . Environmental measures
- 2 . Reduction of fuel cost
- 3 . Reduction of traffic accidents
- 4 . Improved communication among co-workers

Thank You

Keiji Endo

endou@tta.ne.jp

81-33359-3617

<http://www.totokyo.or.jp>