



Ministry of the Environment
Government of Japan

未来が変わる。
日本が変わる。

チャレンジ
25 

Japan's Climate Change Policies

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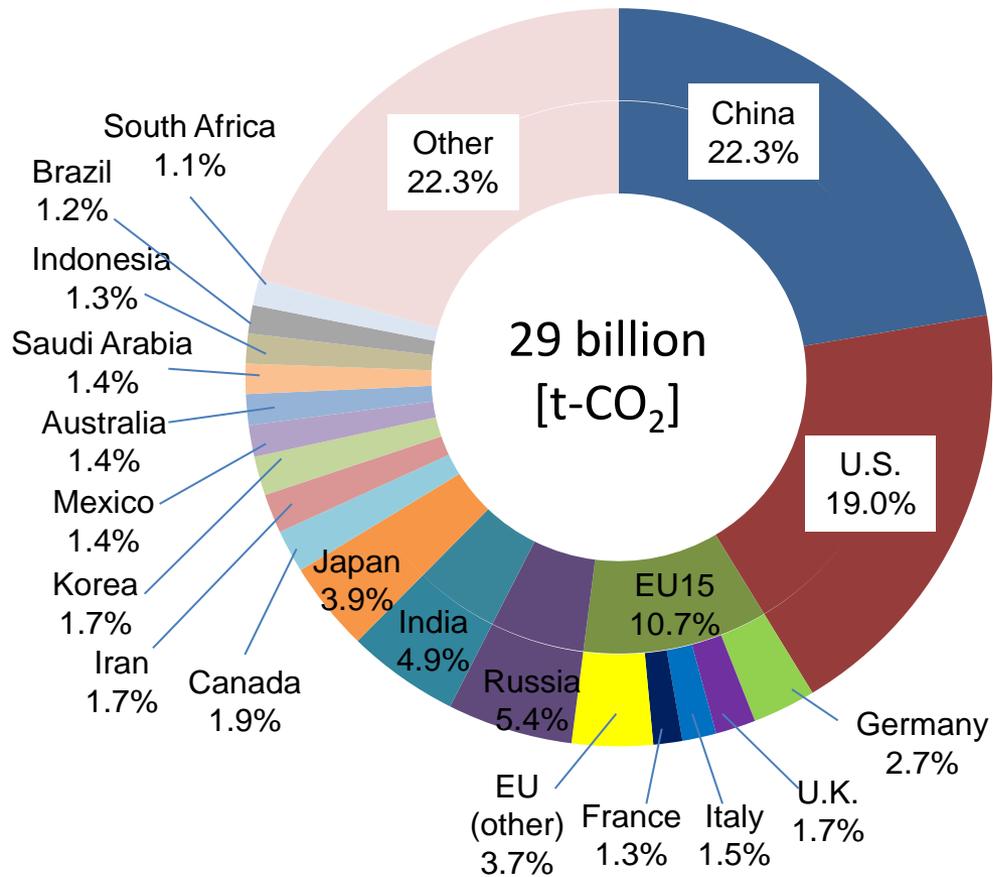
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1 . GHG emissions in the World and the importance of MRV

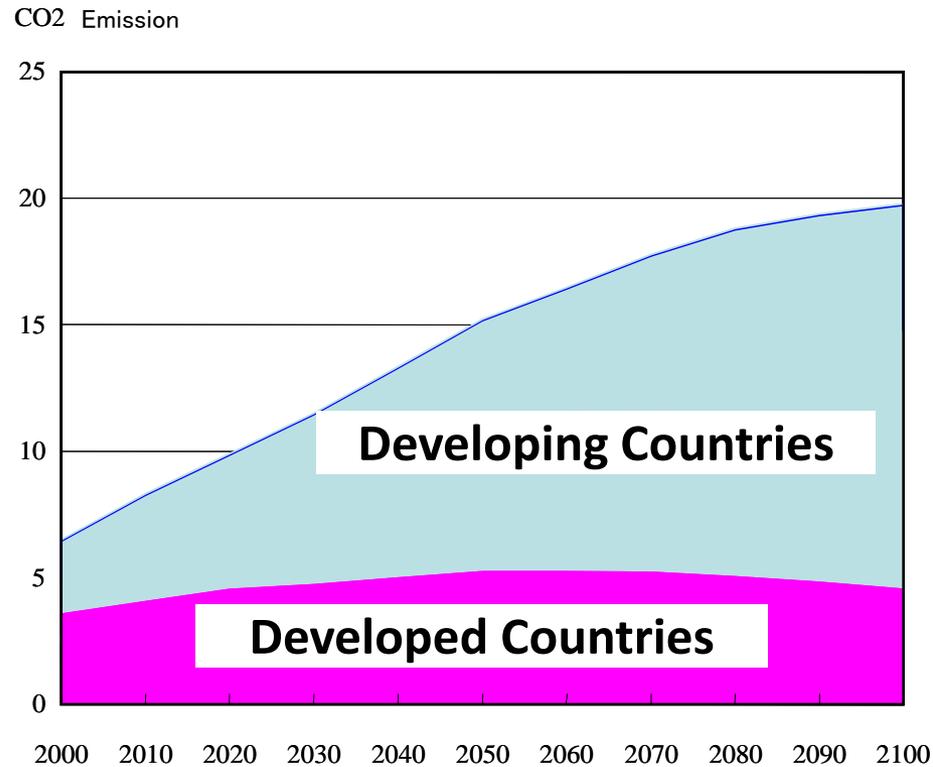
Global CO₂ Emissions

Global CO₂ Emissions (2008)



Source: MOEJ, based on IEA "CO₂ Emissions from Fuel Combustion (2010 edition)"

Global CO₂ Emissions (projection)



Source: Kainuma et al., 2002:
Climate Policy Assessment, Springer, p.64.

Outcomes in Cancun

COP16 in Cancun

- 29 November 2010 – 11 December 2010
- 194 Parties, International Organizations, Observers - 20 thousand participants

- **Cancun Agreements** create a foundation to go forward, through globally recognizing the below 2 degrees temperature increase, and formally anchoring targets of Annex I Parties and actions of Non-Annex I Parties in a COP decision, as they were inscribed in **the Copenhagen Accord**.
- Moreover, **Cancun Agreements**, although everything in it is not perfect to all Parties, provides a number of interim steps, to “operationalize” MRV/ICA systems, financing mechanisms (fast start, Green Climate Fund), technology mechanisms, adaptation frameworks, REDD+ and market mechanisms.
- **2nd commitment of the Kyoto Protocol** and a legal form of Cancun Agreements are open and will be on table in Durban.

National Communication & biennial report

In Cancun Agreements that, both Annex I parties and Non-Annex I parties should submit their national communications and biennial reports, and they are subject to IAR and ICA.

60.

- (b) Non-Annex I Parties should submit their national communications to the Conference of the Parties, in accordance with Article 12, paragraph 1, of the Convention every four years or in accordance with any further decisions on frequency by the Conference of the Parties taking into account a differentiated timetable and the prompt provision of financial resources to cover the agreed full costs incurred by non-Annex I Parties in preparing their national communications;
- (c) Developing countries, consistent with their capabilities and the level of support provided for reporting, should also submit biennial update reports, containing updates of national greenhouse gas inventories including a national inventory report and information on mitigation actions, needs and support received;

63. *Decides to conduct a process for international consultations and analysis of biennial reports in the Subsidiary Body on Implementation, in a manner that is non-intrusive, non-punitive and respectful of national sovereignty; the international consultations and analysis aim to increase transparency of mitigation actions and their effects, through analysis by technical experts in consultation with the Party concerned, and through a facilitative sharing of views, and will result in a summary report;*

2. Current Situation in Japan

Nuclear Power Generation on Energy Policy

EU

In European countries, revision of nuclear policy and utilization of renewable energy are of high interest.

- Germany Nuclear power plants to be entirely shut down by 2022 (cabinet decision)
- Italy In July 2011, over 90% people is opposite to nuclear re-launch (national voting)
- France At this moment, movements of revision of nuclear (over 75% of power supply) are not appeared



Rejection of nuclear power generation might cause an increase GHG emissions

Japan

At first, nuclear crisis should be settled down, at the same time, evaluation of nuclear power in energy policy is deliberated on.

Currently Situation of Japan

Power shortages due to the nuclear crisis at the Fukushima No. 1 power plant.



Necessity of Saving Electricity

Saving Energy at Ministry of the Environment

- 'Super Cool Biz' campaign

to encourage staff to dress more casually (no tie, no jacket, polo shirts, T-shirts etc.)

- Rotation Holiday System

to take a holiday by unit at weekday and work on Saturday

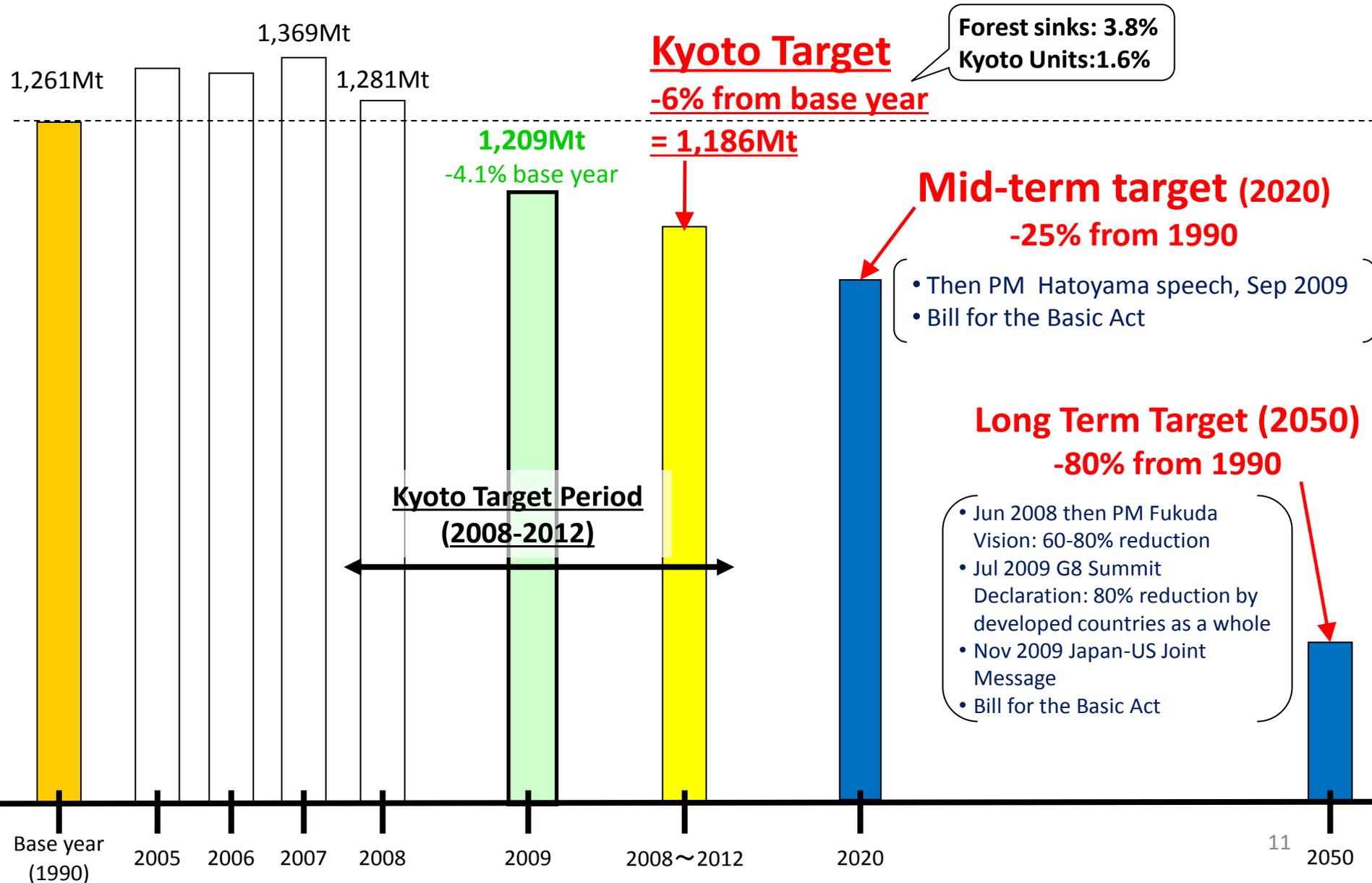
- Use Air Conditioner not too much

to keep the temperature in offices(workplace) at 28 degrees Celsius

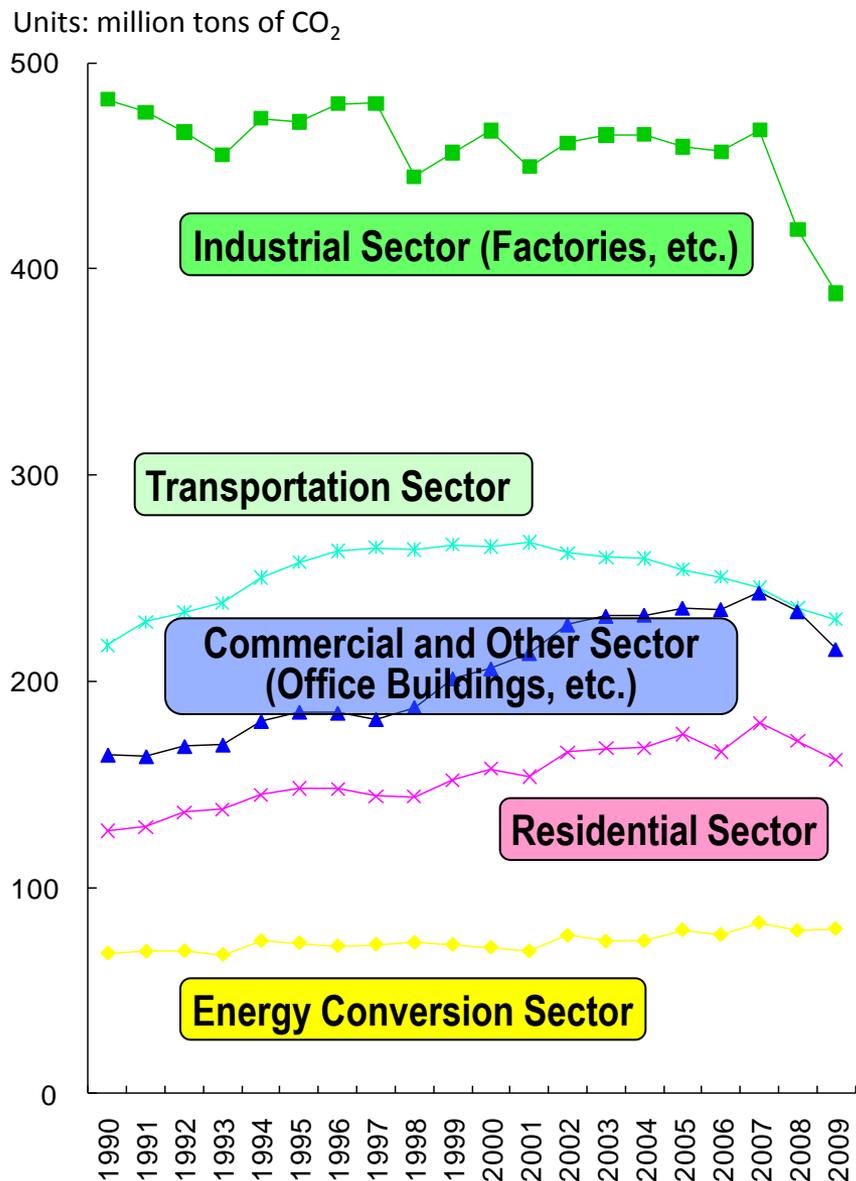
- Use LED light on each desk instead of fluorescent lamp

3. GHG Inventories and GHG Reduction Policies in Japan

Japanese GHG emission and reduction targets



Trends of Energy-related CO₂ Emissions by Sectors and the Targets in 2010



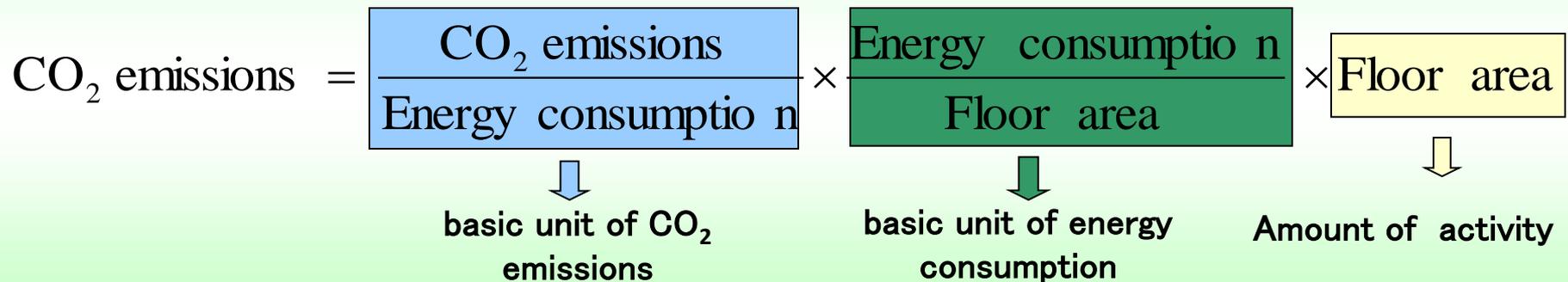
Base year	Change form 1990	2009	Targets for 2010
482	-19.5% 	388	424~428
217	+5.8% 	230	240~243
164	+31.2% 	216	208~210
127	+26.9% 	162	138~141
68	+17.8% 	80	66

Factor Analysis of GHG emission trends

- Analyzing the factors of emission trends is important to establish the PDCA Cycle.
- The contribution of factors to trends can be assessed by breaking down emissions into a product of three factors.
- The three factors are: basic unit of CO₂ emissions; basic unit of energy consumption; and amount of activity.

Formula to analyze the trend of CO₂ emissions from fuel combustion
e.g. Commercial and Other Sector

$$\text{CO}_2 \text{ emissions} = \frac{\text{CO}_2 \text{ emissions}}{\text{Energy consumption}} \times \frac{\text{Energy consumption}}{\text{Floor area}} \times \text{Floor area}$$



basic unit of CO₂ emissions basic unit of energy consumption Amount of activity

Factor Analysis of CO₂ emissions trend in the Energy sector from 2008 to 2009

(Basic unit : 10,000t CO₂)

Subsectors		Amount of Activity		Basic Unit			Climate	Total	
		Amount of Activity Index	Increase / Decrease		CO ₂ (excl. electricity)	CO ₂ from electricity			Energy consumption
Residential		Number of households	+180	-1,100	-10	-800	-280	-10	-930
Commercial and other		Floor area	+190	-1,950	-10	-950	-990	-80	-1,830
Industry		Industrial Output Index	-3,730	+660	-340	-600	+1,520	-	-3,070
Transport	Passenger	Traffic Volume	-240	+160	+10	-50	+210	-	-80
	Cargo	Traffic Volume	-560	+90	±0	±0	+90	-	-470
Energy Conversion		Secondary energy output	-460	+550	+550	-	-	-	+80
Total CO ₂ from fuel Combustion		—	-4,630	-1,590	+190	-2410	+620	-90	-6,310

Reduction of electricity generation by fossil thermal

Promotion of energy-efficient appliances and people's energy-saving efforts

Decline in production

Decrease in efficiency caused by low operation rate

Decline in cargo demand

Note: Comments in words balloons are the primary factors considered to have caused the increase or decrease. Total figures are not necessarily equal to the breakdowns due to the round-off.

Progress toward Kyoto Target

○ Verification of achievement for 6% reduction at Kyoto Protocol Target

- FY 2008 and FY 2009

Reached to the level of target clear

- FY 2010

Based on projection of a private institute in Japan, it was estimated to achieve the target, however, due to the Earthquake on 11 March, both an increasing factor (reduction of operation of nuclear power plant) and a decreasing factor (saving energy) may affect the out come.

The Preliminary Figures of National Greenhouse Gas Emissions in FY2010 will be published around November 2011, which is calculated based on inventory methods.

- FY 2011 and FY 2012

Review GHG emission sometimes will be projected by several available indicators such as monthly industrial data and interim economic data.

5th National Communication

Japan's 5th National Communication

Submission : January 1st, 2010

Contents of Japan's 5th National Communication

Chapter 1 : National Circumstances Relevant to Greenhouse Gas Emissions and Removals

Chapter 2 : Trends in GHGs Emissions and Removals ← **National Inventory**

Chapter 3 : Policies and Measures

Chapter 4 : Projections and the Total Effect of Policies and Measures

Chapter 5 : Vulnerability Assessment, Climate Change Impacts and Adaptation Measures

Chapter 6 : Financial Resources and Transfer of Technology

Chapter 7 : Research and Systematic Observation

Chapter 8 : Education, Training, and Public Awareness

In-Country Depth Review : November 8-13, 2010

-Several recommendations relating to the completeness and transparency of Japan's reporting, but no question of implementation was raised by the ERT.

Next Submission (6th National Communication)

Deadline : January 2014

Japanese Examples of Actions (Continuous Efforts)

- Annual Inventory
- Submitted 1st -5th National Communication (-2010)
- Kyoto Target Achievement Plan (Revised in 2008)
- Design of Policies and Measures for 2013 and beyond
- The Act on Promotion of Global Warming Countermeasures
- Legislations for energy efficiency for vehicles, electric appliances and factories (so called “Top Runner System”)
- Decide to introduce environmental tax system
- Grant for promotion of energy-saving product “eco-point system “
- Environmental Assessment Law including GHGs
- Forest Management (Regeneration of neglected forests, Urban Greening)

.....etc

Further information

“Japan's National Greenhouse Gas Emissions for FY 2009” (In English)

<http://www.env.go.jp/en/headline/headline.php?serial=1580>

“Mid-and Long-term Roadmap for Global Warming Measures” (In English)

http://www.challenge25.go.jp/roadmap/index_en.html