

12th Asia Pacific Seminar on Climate Change, Bangkok, Thailand
30 July – 2 August 2002

Japan' Policy towards the Implementation of Kyoto Protocol



July 30, 2002

Yasuo Takahashi

Director

Office of International Strategy on Climate Change

Global Environment Bureau

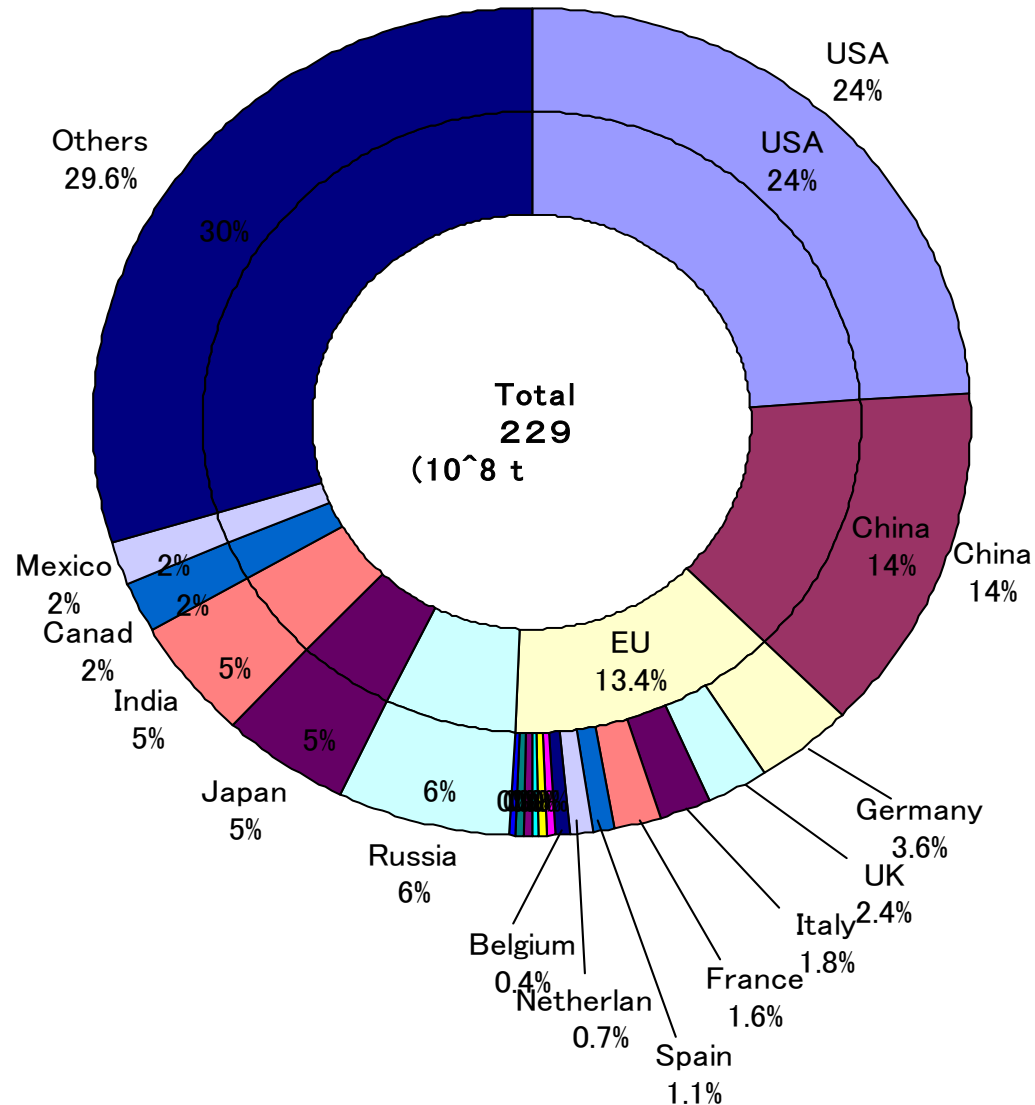
Ministry of the Environment, Japan



Contents

- Ratification of the Kyoto Protocol
- Climate Change Policy Law
- Climate Change Policy Program
- International Cooperation

CO₂ Emissions from each country (1998)





The Kyoto Protocol (cont'd)

Target Gases	CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆
Base Year	1990 (or 1995 for HFCs, PFCs, SF ₆)
Commitment Period	2008~2012
Reduction Target	Japan - 6 % USA - 7 % EU - 8 %



The Kyoto Protocol (cont'd)

The Protocol will enter into force after

- At least 55 Parties ratified
(75 Parties ratified as of July, 2002)
- Ratified Parties include developed countries representing at least 55% of the total 1990 CO₂ emissions from this group

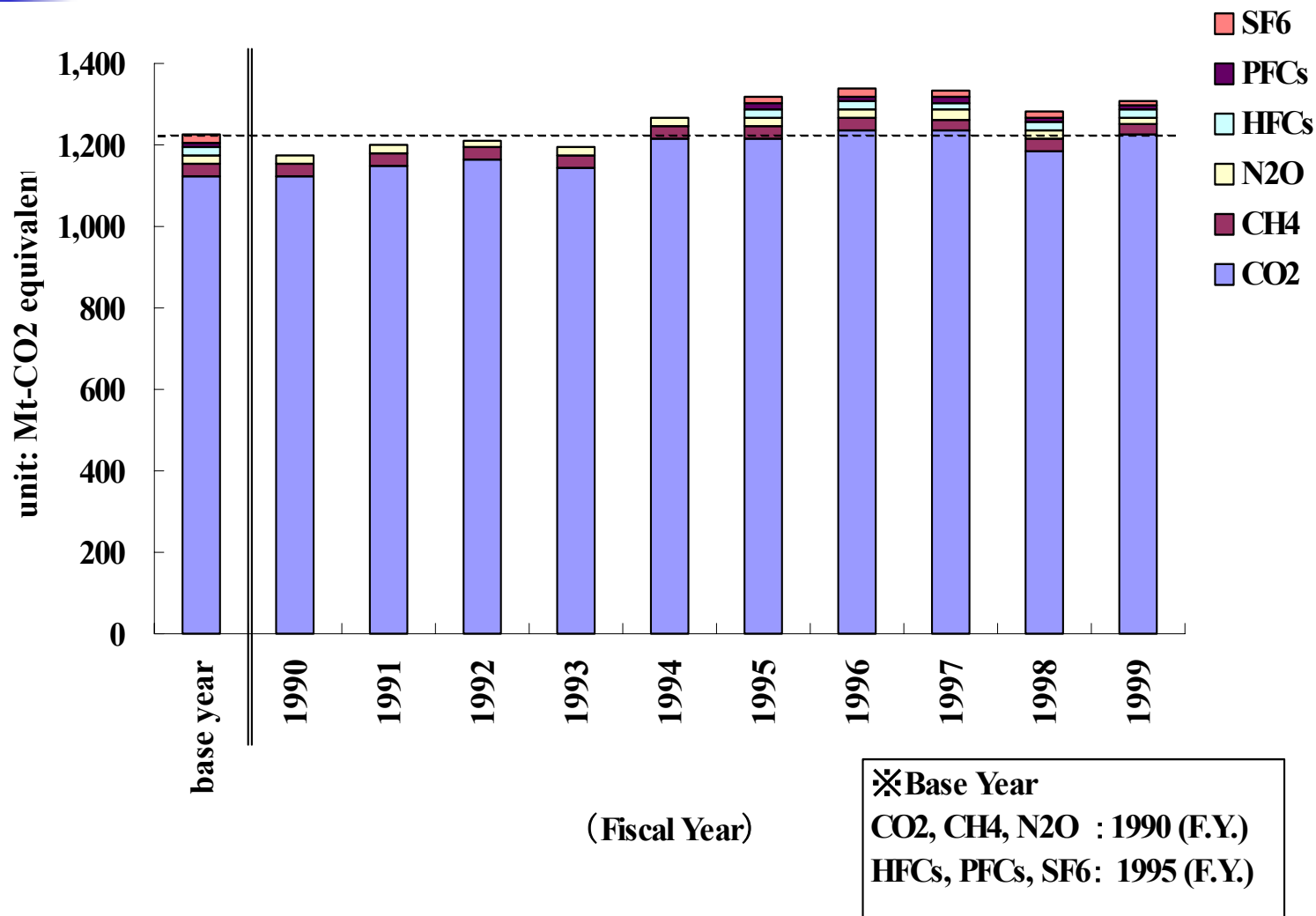


Japan Ratified the Kyoto Protocol

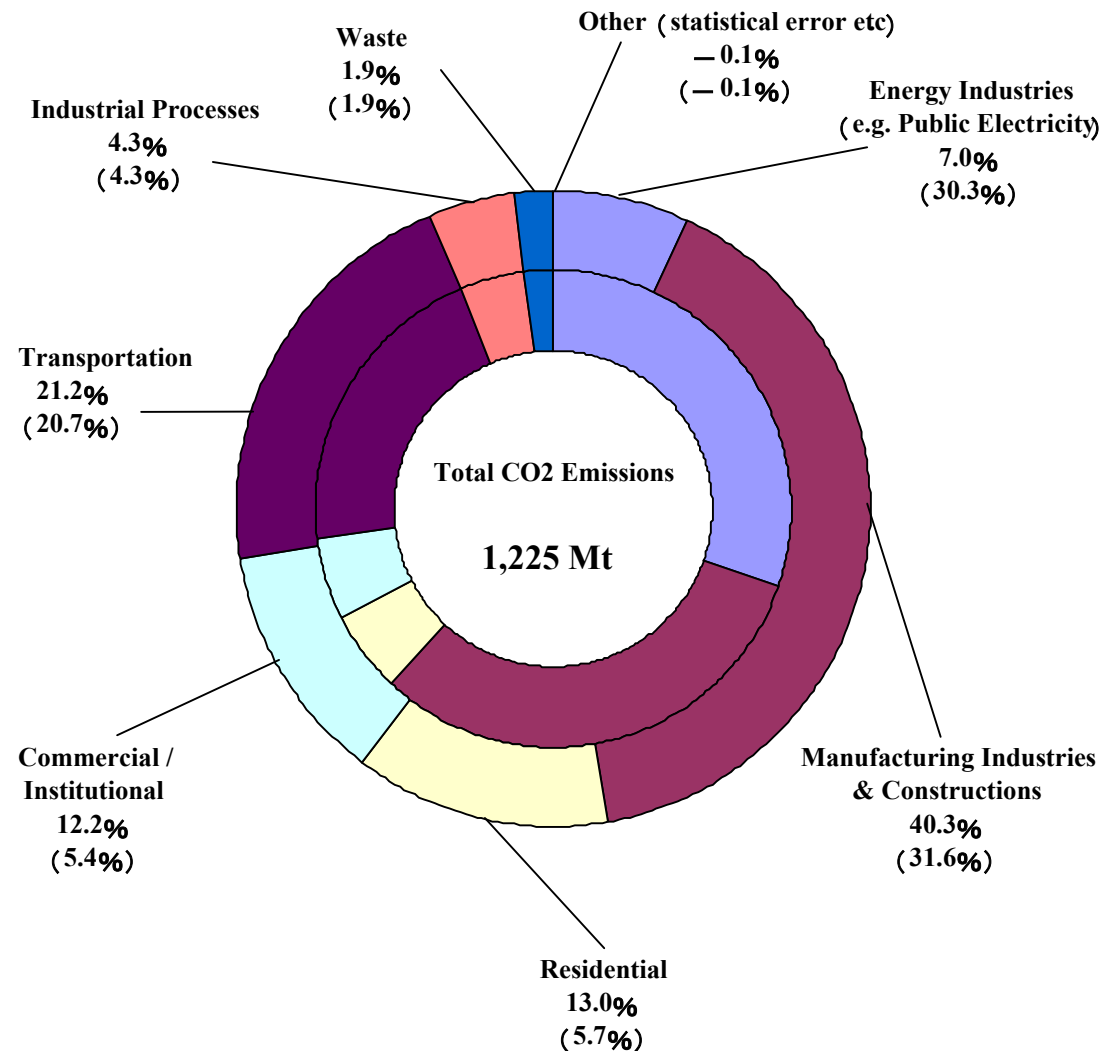
- Process to the ratification
 - The House of Representatives approved on May 21.
 - The House of Councillors approved on May 31.
 - Cabinet made the final decision on the ratification of the Protocol on June 4.
 - Japan ratified the Protocol on June 4. (74th Party)

- The ratification is a significant milestone in Japan's environmental policy.

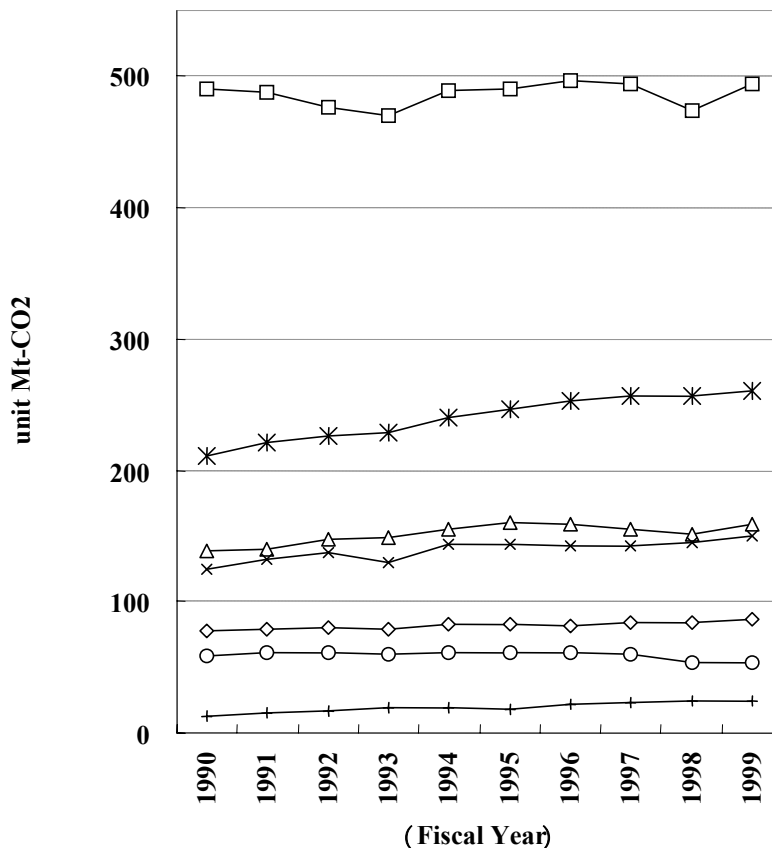
Trends of GHGs Emissions in Japan



1999 CO₂ Emissions by Sectors in Japan



Trends of CO₂ Emissions by Sector in Japan



CO₂ Emissions from 1990 to 1999
(growth rate from 1990(F.Y.))

**Manufacturing Industries
& Construction**
490 M_t → 494 M_t (+0.8%)

Transportation
211 M_t → 260 M_t (+23.0%)

Residential 138 M_t → 159 M_t (+15.0%)

Commercial / Institutional
125 M_t → 150 M_t (+20.1%)

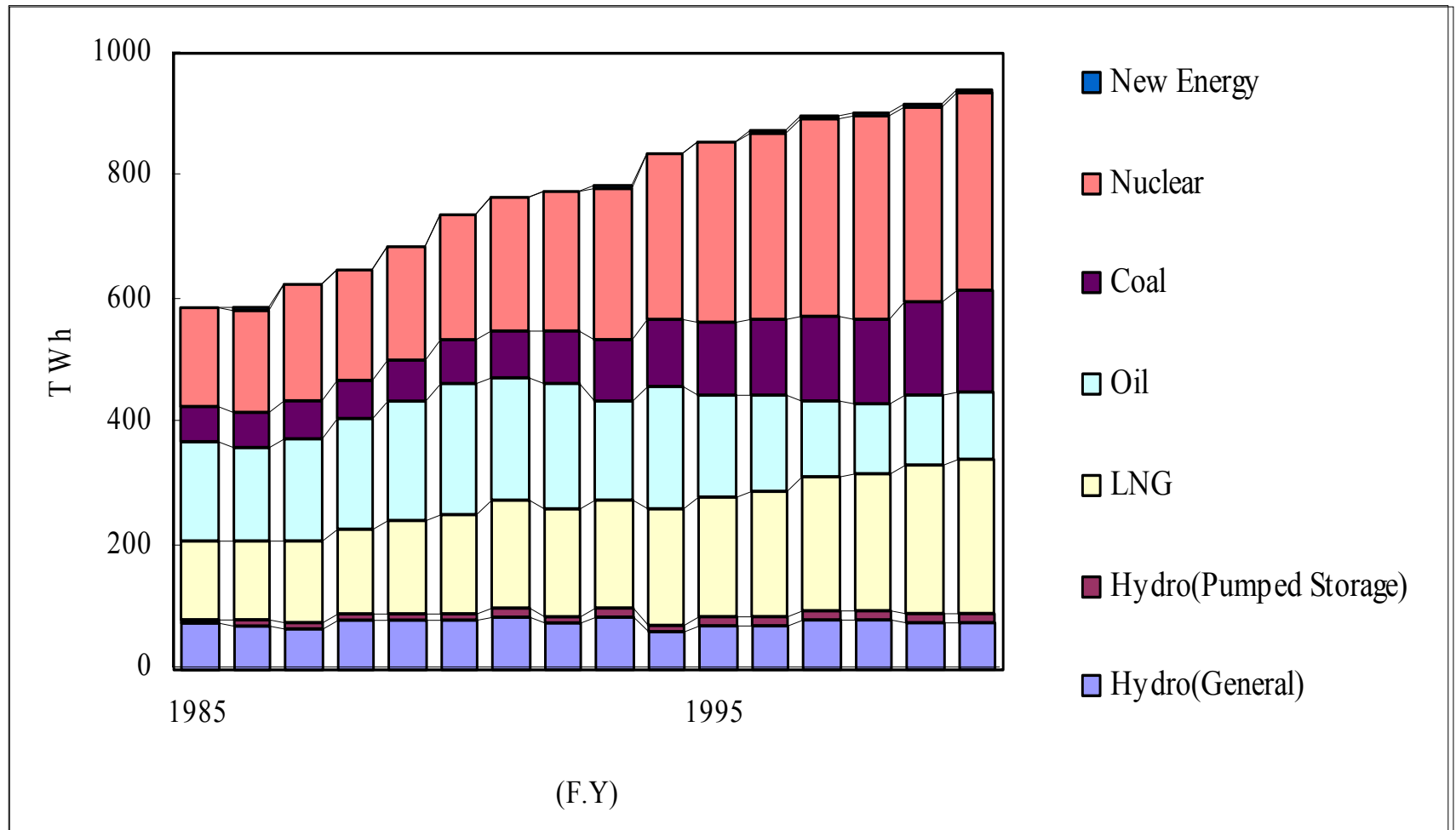
Energy Industries 77 M_t → 86 M_t (+11.7%)

Industrial Processes 59 M_t → 53 M_t (-9.5%)

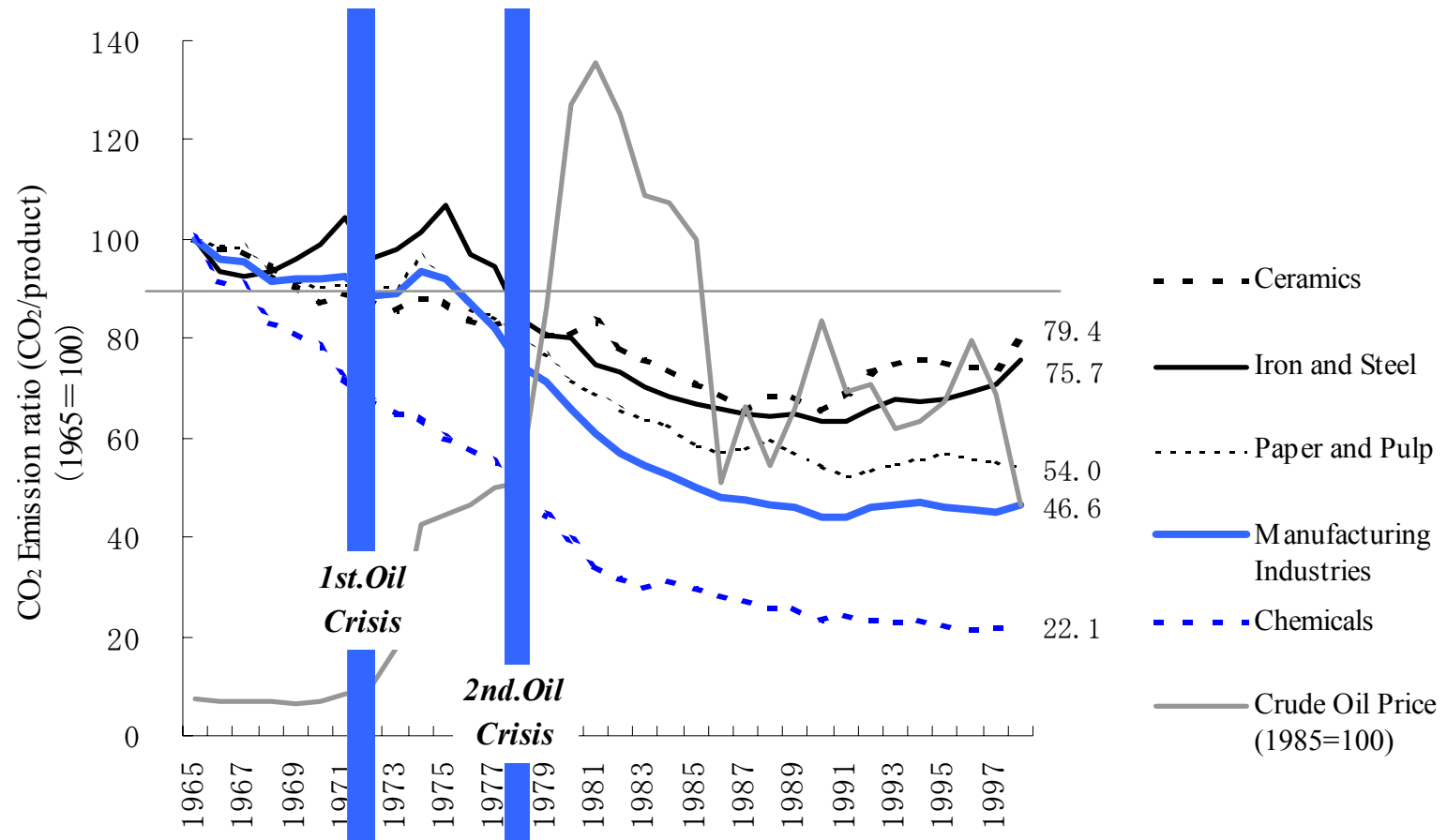
Waste 13 M_t → 24 M_t (+86.3%)

note: CO₂ Emissions from public electricity is allocated to each sector by consumption of electricity.

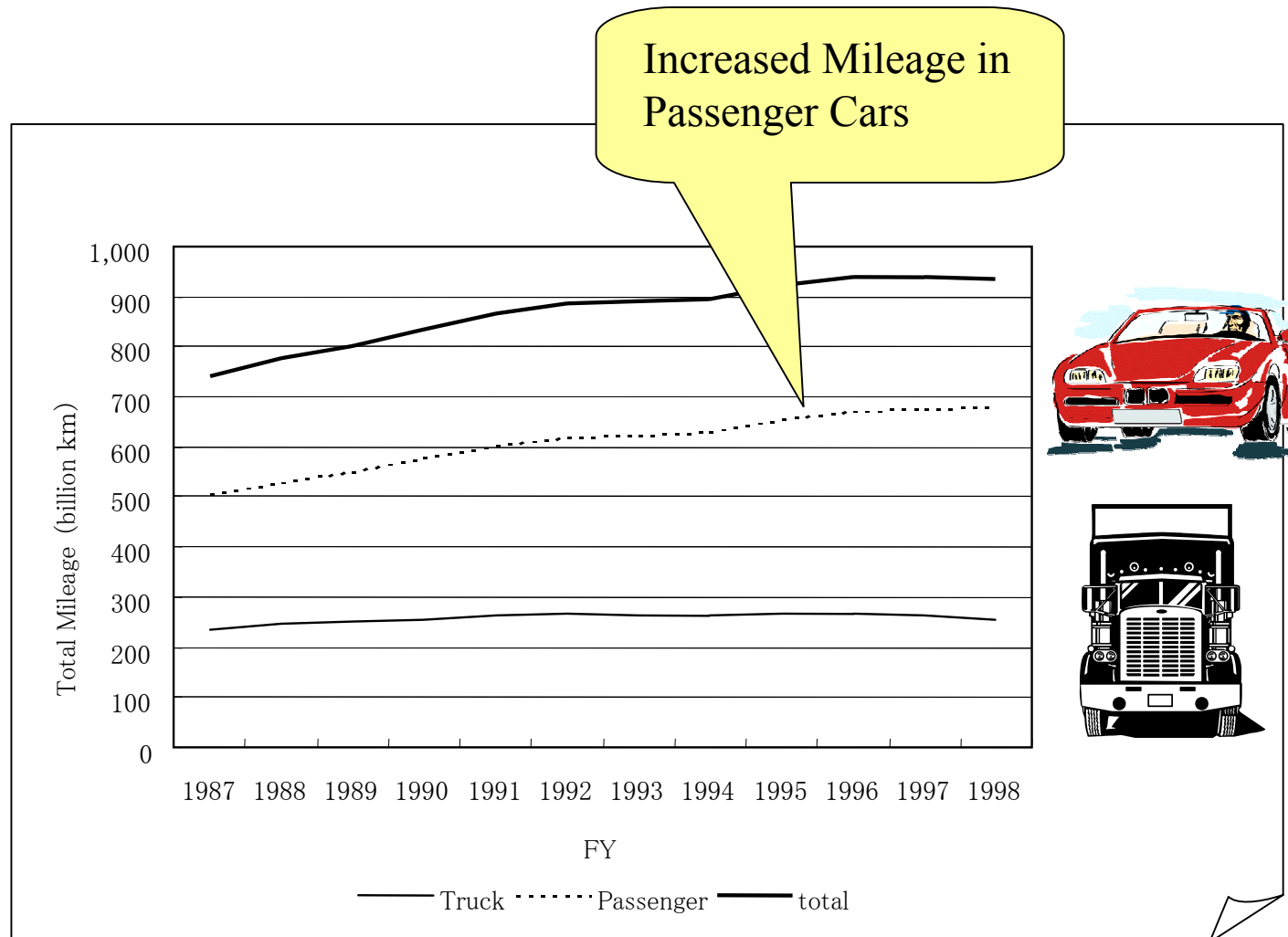
Trends of Electric Power Generation in Japan



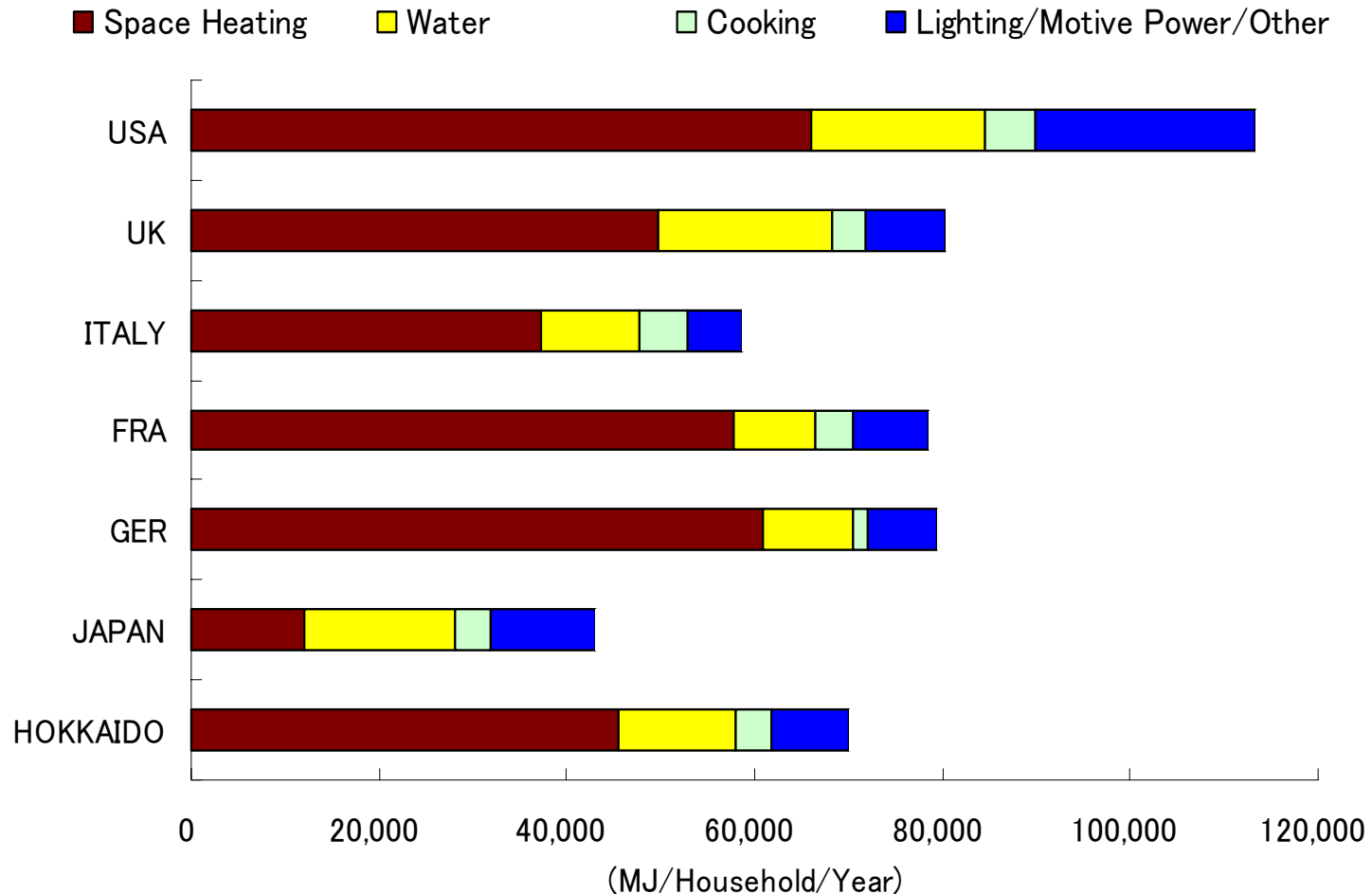
CO₂ Intensity of Industries in Japan



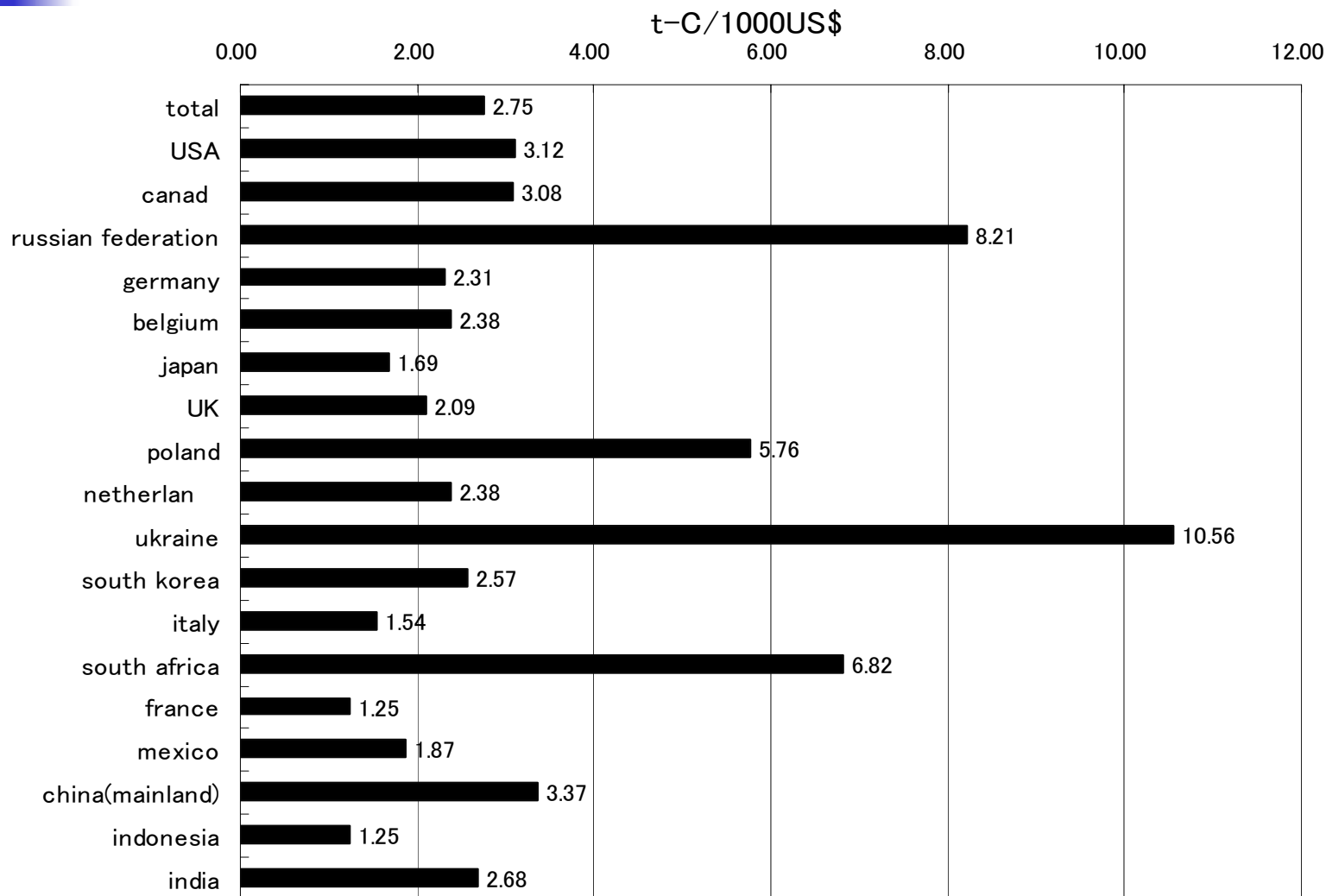
Japan's Trends of Mileage



Comparison of Energy Consumption per Household



CO₂ emissions per GDP (1995)





Analysis of Japan's Trends

Increase: Transport Sector ← Increase with the number of Passenger Transports
Commercial/Institutional Sector ← Increase with the Floor Space
Residential Sector ← Increase of Households

Decrease: Industry Sector ← Structural Change in the Industry Sector

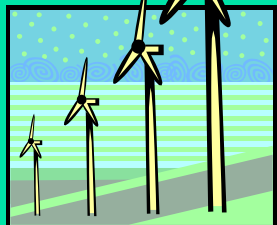
Transsectoral Factor

Increase: Increase in the Energy Intensity
Transportation (Big & Heavy Cars, and Traffic Congestion)
Residential Sector (the Number of Electrical Appliances & Size Enlargement)

Decrease: Improvement of CO₂ Emission Coefficient for Electricity (For Industry and Residential)

Climate Change Policy

Renewable Energy



Energy Industry

Improvement of Efficiency
Energy Conversion
(Tax on Coal)
Environmental Assessment
System on Trading Electricity
Quota System



Industry



Introduction of
Combined Generation
Voluntary
Action Plan

HFC, PFC,
SF6

Recovery,
Destruction,
Substitution

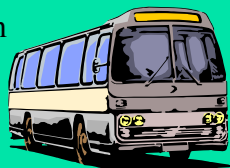
Transport

Measures
against
Congestion



Measures on
Distribution

Traffic Assessment
Modal Shift



Introduction of
Low-Emission-
Vehicles



Utilization of
Solar Energy

Diagnosis of
Households

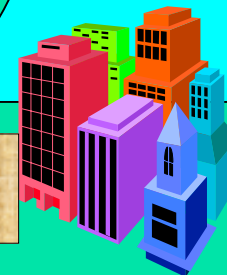


Spread of Energy-
saving Appliances



Commercial/ Residential

ESCO



Reduction
Measures

Recycle

Measures on
Sewage Waste

Utilization of Waste Plastics

Spread of Energy-
saving Equipment

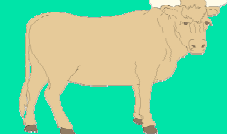
Waste

Measures on Disposal of Excrement

Afforestation



Improvement
of Productivity



Agriculture



Breakdown of 6% Target

	Breakdown	
	Within Sector	Breakdown of 6% Target
Industry	-7%	± 0%
Commercial/ Residential	± 0%	
Transport	+17%	
Utilities	+5%	
Others		-2%
CH ₄ , N ₂ O etc.		-0.5%
HFCs, PFCs, SF ₆		2%
Sink		-3.9%
Kyoto Mechanism		-1.6%



Targets and Actual Emissions

	Targets	Actual Emissions in 1999
Industry Sector	—7%	+0.8%
Commercial, Institutional and Residential Sector	±0%	+17.4%
Transport Sector	+17%	+23.0%
Total	±0%	+9.0%



Japan's Climate Change Policy

To achieve the Kyoto target

- Climate Change Policy Law
 - A framework legislation to promote measures
- Climate Change Policy Program
 - Government-wide action program to promote measures
- Energy Conservation Law
 - Mandatory energy efficiency standards under the best available technologies
 - Energy efficiency requirements in factories.



Climate Change Policy Law

- The Kyoto Target Achievement Plan
 - Adoption of the Plan, the review of its implementation and the revision of the Plan.
- Corporations with a great amount of emissions
 - Making a plan on measures for reducing emissions is encouraged.
- Centers for the Promotion of Activities to Prevent Global Warming
 - The establishment of Centers are stipulated.



Climate Change Policy Law (cont'd)

- The Global Warming Prevention Headquarters
- Enhancing the national effort
 - “Climate Action Advice” for citizens.
 - “Local Partnership Council” for the promotion of actions at local level.

etc.



Climate Change Policy Program

- Cabinet Headquarters decided “the New Climate Change Policy Program”. (March 19)
- Serve as the basis for implementing measures to achieve the 6% emissions reduction commitment under the Kyoto Protocol.
- Upgrading the New Climate Change Policy Program into the Kyoto Target Achievement Plan under the Climate Change Policy Law.



Climate Change Policy Program (cont'd)

- The integration of the environment and economy
- Step by step approach (Check the progress and implement additional measures if necessary)
- All sectors (national and local governments, business and industry and civil society organizations) should make their utmost to take actions.
- International cooperation



Climate Change Policy Program (cont'd)

- A package of more than 100 individual measures to be taken by all relevant government agencies
- Specifies emission reduction goals by sectors
- Identifies estimated reductions by individual measures
- Include measures to enhance forest management and other sink activities, to use the Kyoto Mechanisms and to promote technological innovation



Energy Conservation (22mt-CO₂)

- Industry sector
 - Implementation of voluntary action plans by industries
 - R&D of high efficient boilers, etc.
- Household and commercial sector
 - Application of energy management system to large commercial buildings
 - Application of the best available technology
- Transport sector
 - Introduction of vehicles achieving high energy-efficient standards
 - Efficient logistics systems such as shift of transport modes



Renewable and New Energy(34mt-CO₂)

- Expansion of new markets for electricity generated from new energy
- Subsidies to promote introduction of photovoltaic power, wind power, biomass energy, etc.
- Strengthen R&D and demonstration tests on fuel cell, photovoltaic power, biomass energy, etc



Law on Rational Use of Energy

- Energy efficiency regulation for energy-intensive manufacturing industries
- Energy efficiency standards for some consumer products
- Energy efficiency standards for housing and buildings



Financial Assistance Measures



- Subsidies for the purchase of low-emissions-vehicle
- Loans at preferential interest rates for the construction of energy-efficient houses and buildings
- Subsidies to promote the development of renewable energy
- Subsidies for the purchase of home-operated photovoltaic systems



Other Related Laws

- Amendment of Energy Conservation Law
 - Application of energy management system to large commercial buildings etc.
 - Promote appropriate energy conservation measures for buildings at the construction stage.
- The Law Concerning the Use of New Energy by Electric Utilities
 - Mandate electric utilities to achieve the fixed level of the electric power generated from new energy.



Use of the Kyoto Mechanisms

- Cost-efficient measures to achieve the 6% reduction commitment
 - Supplemental to domestic action
- CDM/JI Feasibility Study (MOE, from 1999)
- Establish “The Advisory Panel on the Kyoto Mechanisms” (April 2002)
- Establish a liaison committee by relevant ministries to utilize the Kyoto Mechanisms (July 2002)

Project Profiles of CDM/JI Feasibility Studies (2002)

Biomass Use (JI)

Bulgaria

OECC

「Biomass use for Regional Air-conditioning System」

Forestation (CDM)

Vietnam

Nissho-Iwai Research Institute

「Forestry CDM Project Utilizing Private Finance」

Landfill Sites (CDM)

Thailand

Obayashi Co., Ltd.

「Power Generation Using Methane from Landfill Sites」

Biomass Use (CDM)

India

Japan Energy Research Center Co., Ltd.

「Study on Production of Ethanol Gasoline from sugar cane refuse」

Biomass Use (CDM)

Malaysia

Tokyo-Mitsubishi Securities Co., Ltd.

「Practical Steps in Obtaining Carbon Credits Through a Biomass (Palm Shell) Electricity Generation Project」

Others (CDM)

Pacific Islands

Pacific Consultants Co., Ltd

「Small Scale CDM Projects in South Pacific Island Countries」

Biomass Use (CDM) Malaysia

EX Corporation

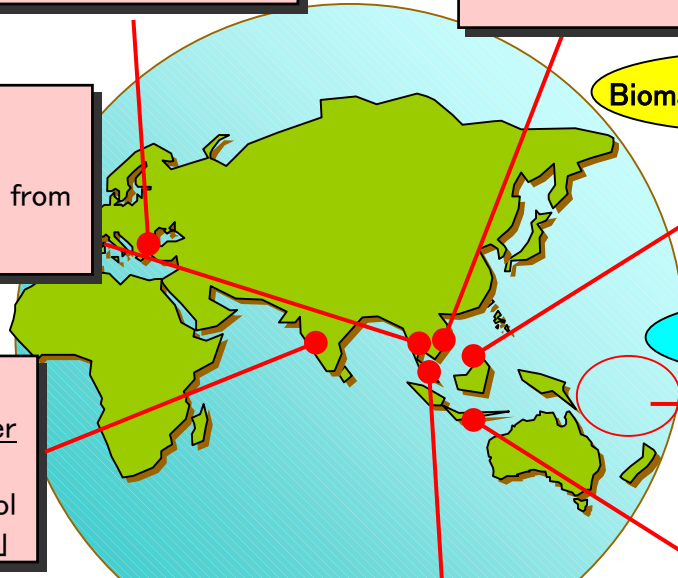
「Reducing Methane Emissions from Anaerobic Lagoons Treating Effluents from Palm Oil Production II」

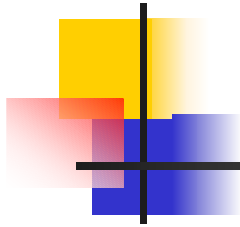
Forestation (CDM)

Indonesia

Sumitomo Forestry Co., Ltd.

「Feasibility Study on Forestry CDM Project」





International Cooperation

- To be truly effective, all countries need to act under a common rule.
- With a view to eventually achieving this goal, Japan intends
 - to further continue policy dialogue with the US.
 - to work with other countries so that effective global regime will be established.



International Cooperation(cont'd)

- Environmental Congress for Asia and the Pacific(Eco Asia)
- Asia Pacific Seminar on Climate Change
- Asia-Pacific Network on Climate Change (APNET)
- Feasibility Study for CDM and JI
- Asia-Pacific Network for Global Change Research (APN)
- Eco-Frontier Fellowship Program