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International Forum on Global Warming

Material for the Panel Discussion

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1. Basic Perception of the Global Warming

- In the 20th Century, the developed countries achieved a certain level of affluence in exchange for heavy energy consumption. The problem of global warming can be seen as a problem inextricably linked to affluence.
- The future challenge facing developed countries is how to sustain this affluent society with the least possible expenditure of energy (Sustainable Development).
- The developing countries must face and overcome the challenge of achieving growth with a minimal consumption of fossil fuels.
- It has become imperative to make the transition to a highly energy-efficient society.

2. Concepts in Behind the Global warming Initiatives

2-1 Initiatives in Japan

- The Japanese industrial sectors understand that it is important to globally disseminate the technologies of efficient energy conversion and utilization we have in Japan. At the same time, we should work to improve it and develop new technologies to pursue further efficiency.
- We think it important to improve the efficiency of energy use and to offer high-efficiency technologies, equipment and the systems to our societies. (Keidanren Voluntary Action Plan on Environment)
- To realize such a challenge, it is important for the government to develop social schemes and legislation in order to encourage and promote the

voluntary activities of the industries. At the same time, it is also important to provide people with information thus educating the public so as to raise their awareness about the environment and encourage them to select low-carbon-emissions products and services in the market.

- In Japan, on Oct.1, 2003, a law was enacted to promote the environmental protection activities and environmental education. It is expected that consumers will begin to value not only the economical aspects but also consider environmental protection as a value in daily market choices. With this, we anticipate that the environmental value will play a significant role in the market mechanism.

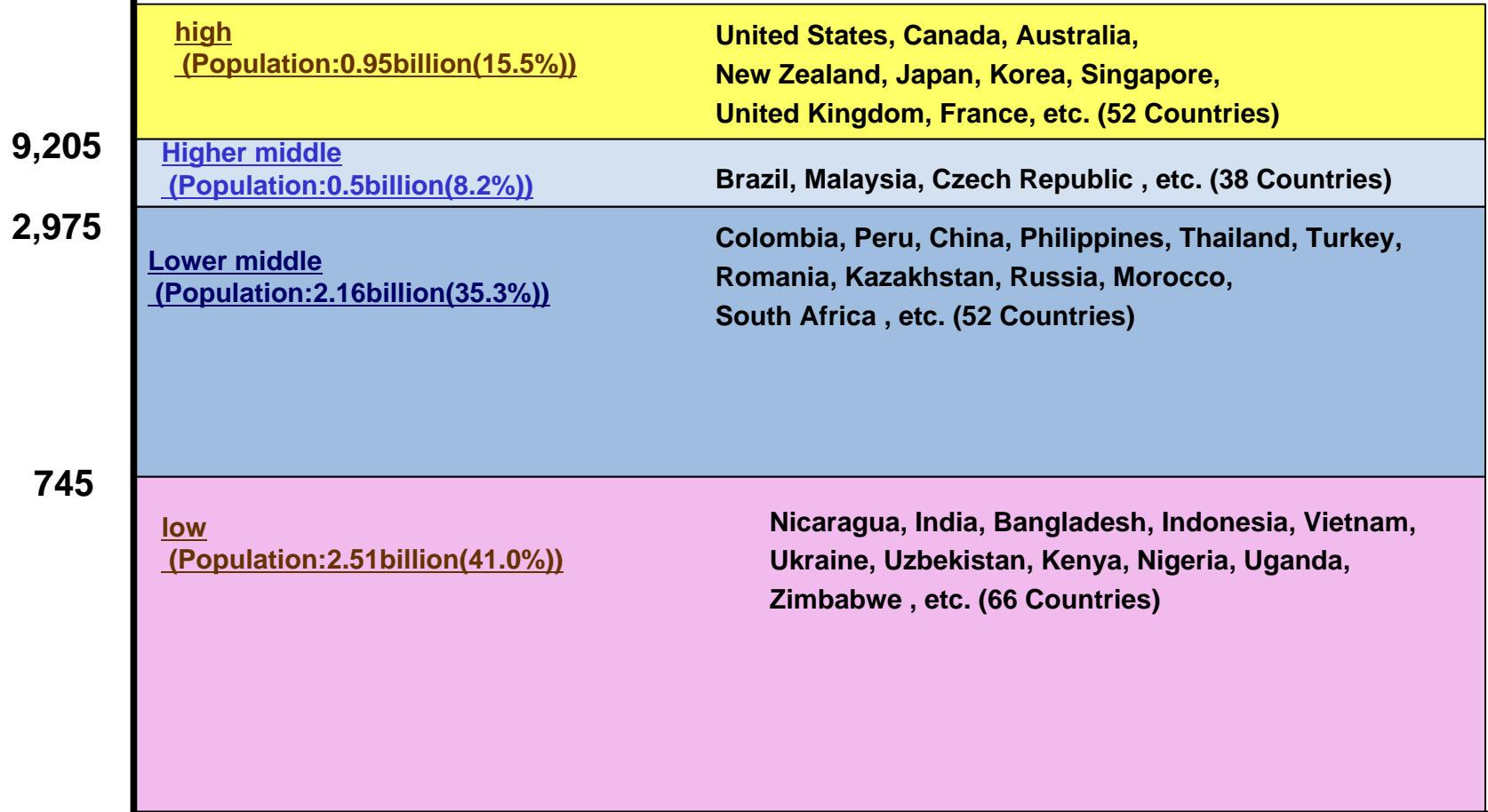
2-2 International Initiatives

- The world is still confronted by critical and difficult challenges in the form of poverty, warfare, terrorism, food supply, starvation, and sanitation. There are still many subjects for developed countries to tackle.
- It is important to use the energy and financial resources, which are limited on the global scale, in the most efficient ways possible. As the word “global” represents, the most important theme is “how to increase effectiveness across the entire planet.
- A more flexible and realistic international framework needs to be pursued to achieve the optimal allocation of money and resources on a global scale.
- Following the adoption of the Kyoto Protocol in 1997, efforts to adhere to the agreement by the individual countries have been emphasized. However, taking lessons from the EU, which has implemented measures as a coordinated region, with eastern Europe member countries included, Japan should also considers taking regional actions with the whole of Asia. This could be accomplished by utilizing the flexibility mechanism as a part of the Protocol in a further flexible manner.
- In addition to those country-by-country approaches, wide-ranging international initiatives should be pursued.
- The Kyoto Protocol defines such international efforts as being complementary. However it is important to consider that every available and effective effort possible against the global warming should be utilized.

Countries classified by Income Group

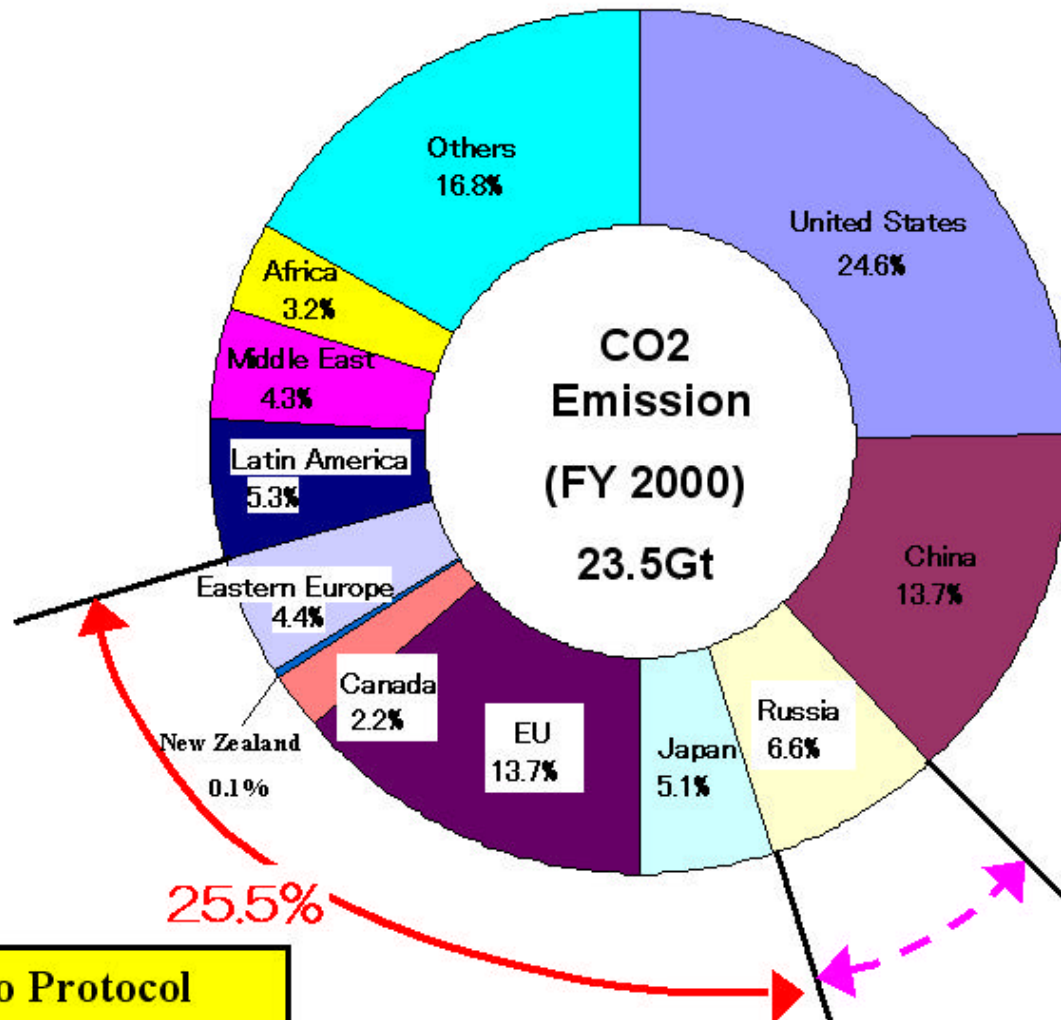
GNI per Capita

(US\$)



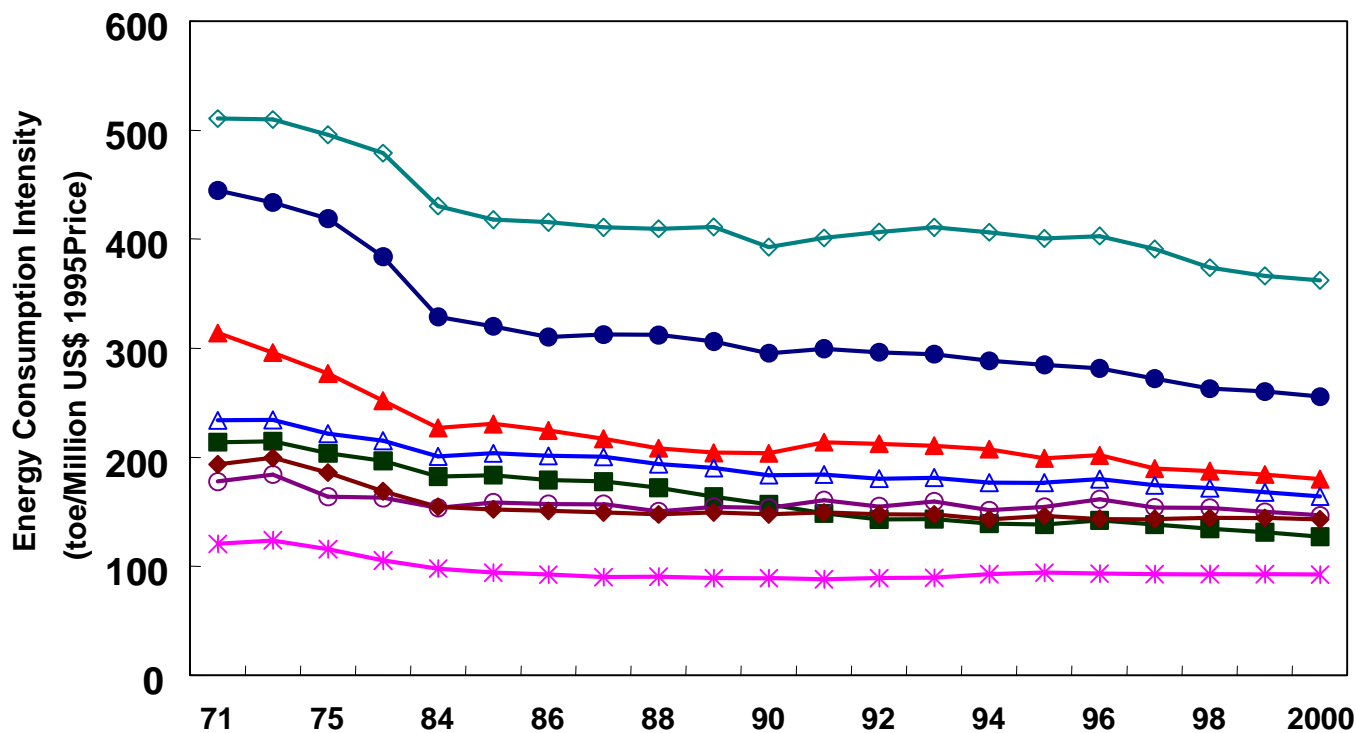
SOURCE:World Bank

CO2 Emission from Fossil-Fuel Consumption



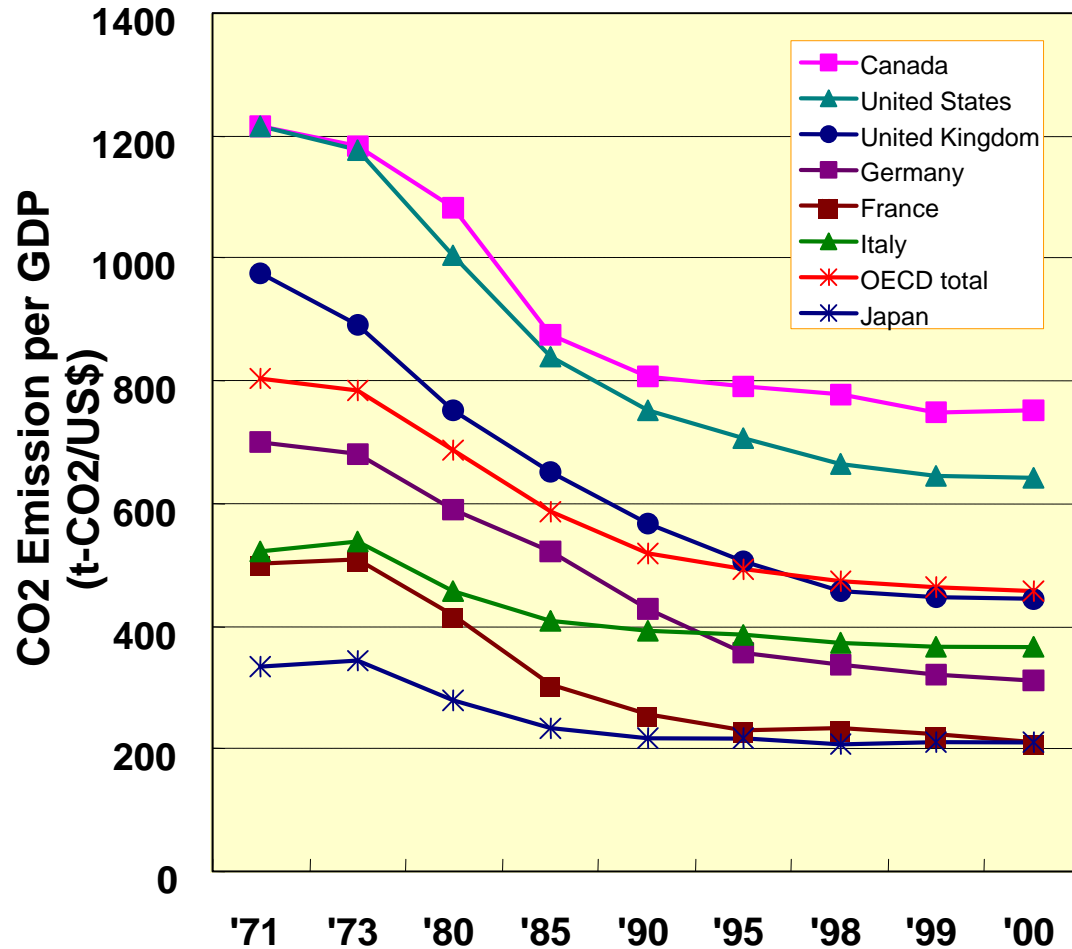
Primary Energy Consumption per GDP

	United States	Japan	Germany	United Kingdom	France	Italy	Canada	OECD
Energy Consumption Intensity (toe/ US\$ Million 1995Price) (FY 2000)	255	92	127	180	146	143	362	164
compared to the previous fiscal year (%)	-1.9	-0.7	-3.3	-2.1	-2.3	-1.1	-1.2	-2.4



SOURCE : OECD ENERGY BALANCES(1999-2000)

CO2 Emission per GDP



SOURCE: Handbook of Energy & Economic Statistics in Japan 2003

Keidanren Voluntary Action Plan on the Environment

- **Launched In 1997**

Updated annually

- **Participants**

35 Industries participating

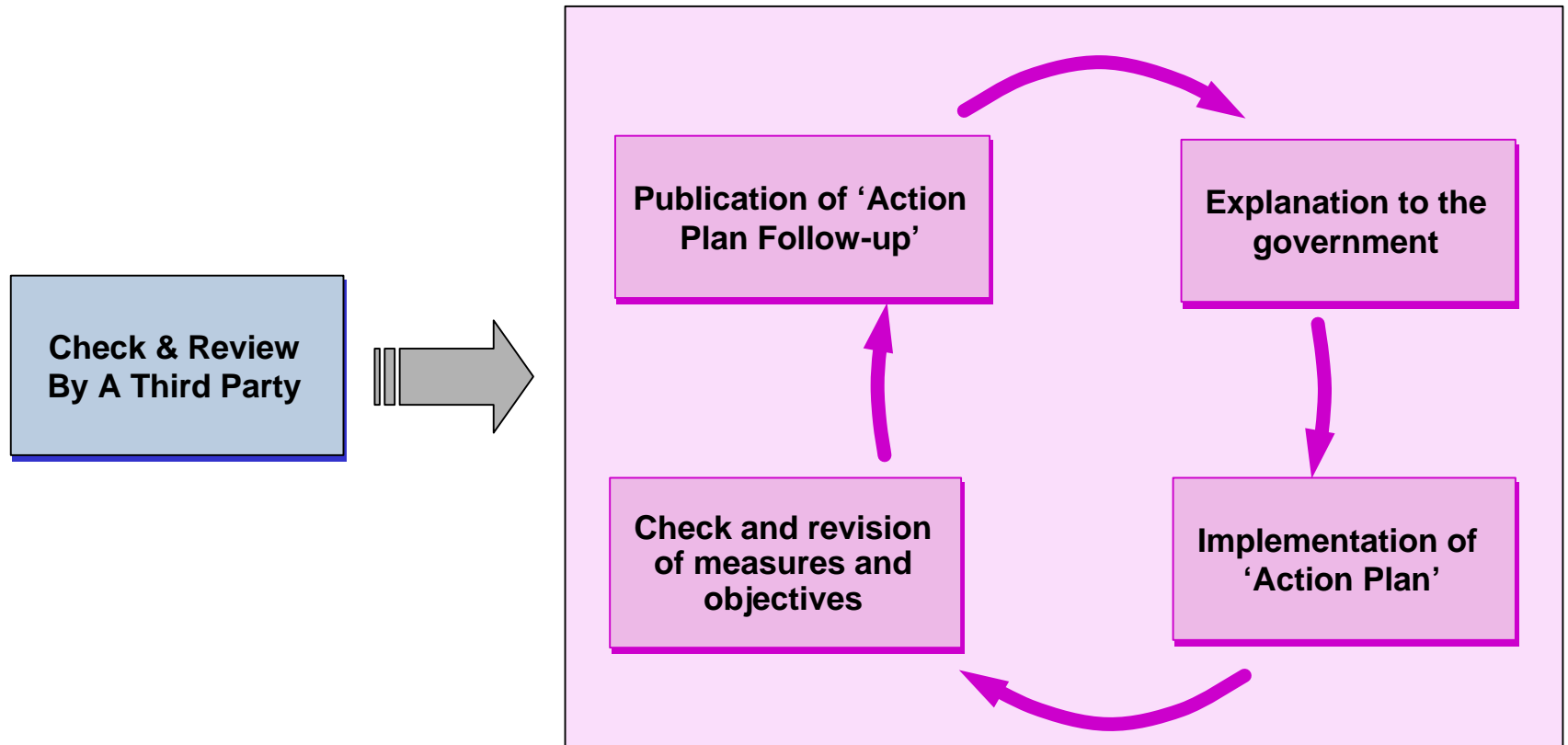
45.3% of total CO2 emission of Japan in FY 1990

82.6% by industrial and energy-converting sectors covered in FY1990

- **Target**

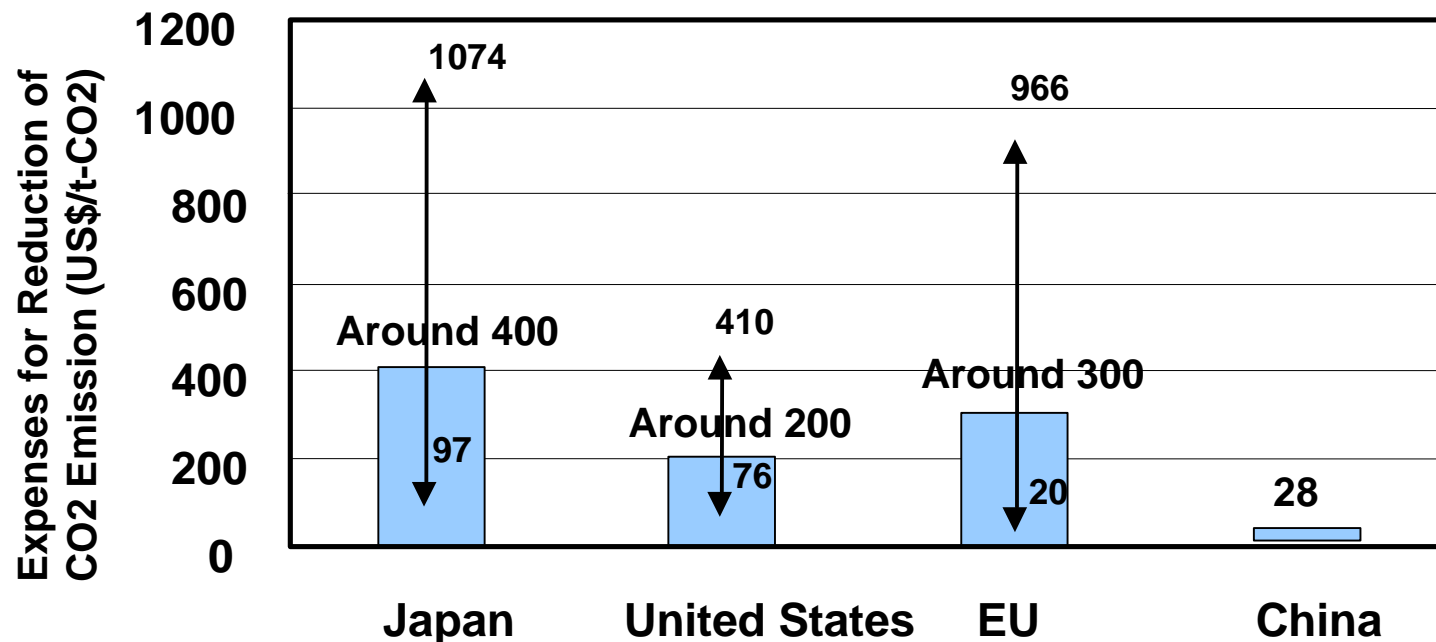
“To endeavor to reduce CO2 emission from the industrial and energy-converting sectors in FY2010 to below the level of FY 1990”

Keidanren Voluntary Action Plan on the Environment



- **Advantages of voluntary action:**
Efficient, effective, practicable and flexible measures can be taken under capitalism

Expenses for Reduction of CO2 Emission (Japan)



Notes:

Japan, United States, EU: Average of the estimates by various models on condition to meet the Kyoto target by 2010

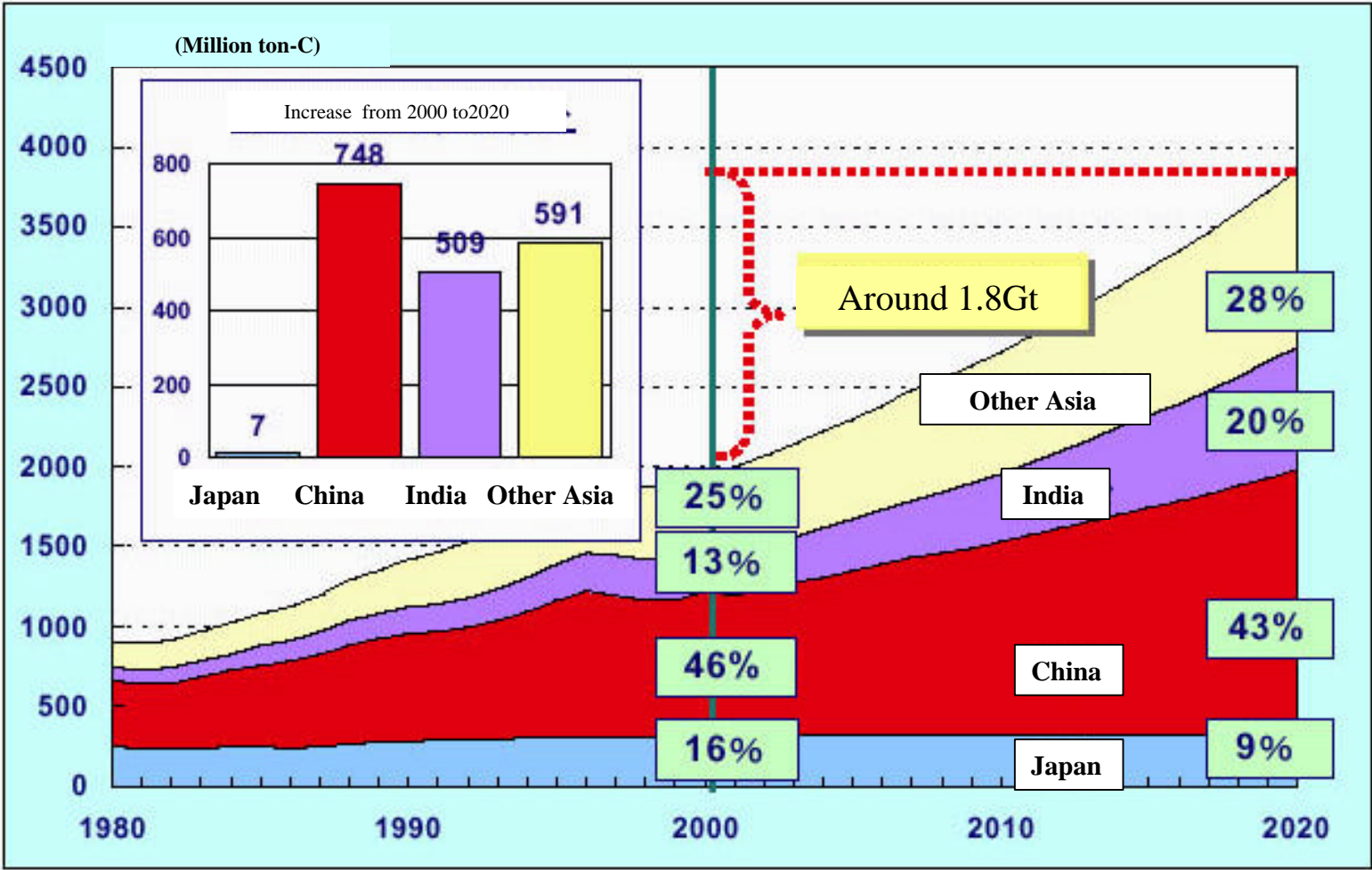
China: Estimate provided that CO2 emissions in 2010 is controlled to be 1.5 times of 1990

SOURCE: The Third Assessment Report Of The IPCC

Expenses for Reduction of CO2 Emission (Japan)

- ✓ **Procurement of Carbon Credit in International Market**
\$3~6/t-CO2 (Natsource, Point Carbon)
- ✓ **Plantation**
\$3~4/t-CO2 (World Bank BCF)
- ✓ **CDM**
\$3~4/t-CO2 (World Bank PCF)
- ✓ **Global Warming Tax**
\$80/t-CO2 (Ministry of Environment)

Outlook for CO2 Emission in Asia



SOURCE: The Institute of Energy Economics .Japan