

## THE GLOBAL ENVIRONMENTAL PACT AND ITS ENVIRONMENTAL IMPACT

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The Third Meeting of the Conference of the Parties to the Framework Convention on Climate Change (FCCC) will be held in Kyoto this December. The parties will meet with the mandate to hammer out binding targets for developed nations to cut greenhouse gas emissions over the next several decades. Due to the differences in their negotiating positions, however, the likely result will be a loosely-worded agreement for industrialized countries to coordinate their policies and cut emissions by a few percent in the next two decades.

The negotiating positions of the parties can be divided into three groups: that of the U.S., of the EU nations, and of developing countries. Of these, the EU is the most active in reducing emissions of greenhouse gases. Meanwhile, countries which use a lot of fossil fuels, such as the U.S., Canada, Australia, and Japan, are taking a position which is less strict than the EU. However, both the EU and the U.S. are taking the common position that developing countries also should commit to fight global warming. The industrialized countries are trying to avoid reductions in their own emissions by requiring the developing countries to also reduce emissions, which threatens to undermine the goodwill that led to the successful negotiation of the FCCC itself.

### *Rapid Rise in Greenhouse Gas Emissions*

In recent years global warming has become generally considered as the most serious global environmental problem. It is well known that human activities are having a "discernible"

influence on global climate. Greenhouse gases—carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and chlorofluorocarbons (CFCs)—which come from burning fossil fuels such as coal and oil are piling up in the atmosphere, where it warms the earth by trapping heat that would otherwise radiate into space. The greenhouse gases emitted today will affect the earth's climate for centuries. The earth has already warmed about 0.5 degrees Centigrade in the past 100 years. The sea level is rising, glaciers are retreating, and over the past several decades, many countries have experienced above-normal temperatures and more intense rain and snowstorms. Scientists link these changes at least in part to greenhouse gas pollution. According to the World Resources Institute,<sup>1)</sup> the world total carbon dioxide emissions from industrial activity was 22.3 billion metric tons in 1992, which is 3.7 times as much as the 6 billion tons in 1950.

Projections on global energy use, recently prepared by three different agencies—the International Energy Agency, the U.S. Department of Energy, and the World Energy Council—suggest that by 2010, in the absence of major policy initiatives to curb their use, the quantity of fossil fuels burned per year is likely to be about 35 percent beyond present levels.

### *The Position of Each Side*

**The U.S.:** The United States, which emits the largest amount of greenhouse gases but whose industry is conducting a costly cam-

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1) The World Resources Institute, *World Resources 1996-97*, 1996.

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paign against emissions cuts, has recently proposed that industrial countries reduce emissions to 1990 levels between the years 2008 and 2012, with further reductions in the following five years. As means of solving the global warming problem, the U.S. has suggested an "Emission Trading System" and "Joint Implementation<sup>2)</sup>".

In the meantime, the U.S. is urging rich developing countries like Korea, Mexico, Singapore, Israel, and Argentina and big countries like China to commit to limiting greenhouse gases emissions. U.S. President Bill Clinton said earlier that while the U.S. was ready to make substantial reductions, developing countries needed to clean their act too.

Japan is taking a position similar to that of the U.S. Japan wants developed countries to set a five-percent cut in emissions from 1990 levels as a base target for the years 2008 to 2012, but goals would be set flexibly, based on each country's economic conditions, and would not be fully binding. Australia, meanwhile, is complaining that even Japan's proposal is too ambitious and would cost jobs and economic growth.

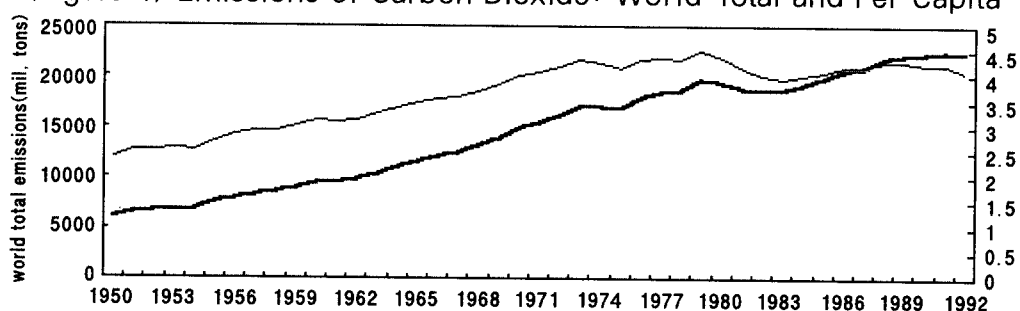
**EU:** The European Union (EU) is pushing for all industrialized nations to commit themselves to cutting emissions of carbon dioxide and other gases to 7.5 percent below their 1990 level by 2005 and to 15 percent below that level by 2010. The plan has run into sharp criticism from Japan, the United States, Australia and Canada, which say the target is unrealistically strict and unfair.

Like the U.S., EU is also emphasizing the necessity for developing countries to take the burden of controlling emissions. In addition, the EU is asking for mandatory applications of policies and measures among Annex X countries<sup>3)</sup>.

**Developing Countries:** The position of developing countries is that insisting on limitations as part of the Kyoto treaty is changing the whole premise of the current negotiations. Developing countries argue that emissions from the developed world are responsible for the overwhelming bulk of excess carbon dioxide in the atmosphere. Thus, their limits should come after the developed nations show real progress.

There are, however, some differences in the

<Figure 1> Emissions of Carbon Dioxide: World Total and Per Capita



Source: The World Resources Institute, *World Resources 1996-97*, 1996

- 2) Joint implementation refers to efforts undertaken cooperatively between countries or entities within them to reduce net greenhouse gas emissions. In April 1995, the first Conference of the Parties to the FCCC further advanced this concept by initiating an international pilot phase called Activities Implemented Jointly (AIJ).
- 3) Annex X is a country group that EU suggested to have to reduce emissions. Annex X includes existing Annex 1 countries and some advanced developing countries as Korea, Mexico, Turkey, and ex-East European countries.

positions of developing countries. While most fast-developing countries are against the position of developed countries, some island countries which are threatened by the rising sea level due to global warming support the developed countries' idea.

*Background for the Differences in Position*

**Differences between developed and developing countries:** The primary reason why developed countries are strongly urging developing countries to commit to controlling emissions is that emissions from

developing countries are forecast to increase at very fast rate. Although carbon dioxide emissions (under a moderate growth scenario) in 2010 are expected to increase some 24 percent from their 1990 levels in OECD nations, emissions from the developing world are projected to more than double, although from a much smaller base. Given current growth trends, developing countries will account for nearly half of global carbon dioxide emissions from industrial sources by 2010; today they are responsible for less than one-third. Particularly, China and India, both of which have rapidly expanding economies and high absolute population growth, will likely be responsible for

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<Table 1> World CO<sub>2</sub> Emissions from Energy Use by Region<sup>1)</sup>

	1980	1985	Change Rate (80-85) <sup>2)</sup>	1990	Change Rate (85-90) <sup>2)</sup>	1992 <sup>2)</sup>	Change Rate (90-92) <sup>2)3)</sup>
World	18,347	19,185	0.9	21,109	1.9	21,141	0.1
OECD	10,145	9,788	-0.7	10,434	1.3	10,616	0.6
USA	4,770	4,621	-0.6	4,895	1.2	5,095	1.3
Japan	920	913	-0.2	1,068	3.2	1,091	0.7
EU15	3,394	3,156	-1.4	3,222	0.4	3,126	-1.0
non-OECD	8,232	9,436	2.8	10,704	2.6	10,650	-0.3
Asia <sup>5)</sup>	903	1,145	4.9	1,619	7.2	1,848	6.8
Europe <sup>6)</sup>	1,166	1,202	0.6	1,028	-3.1	856	-8.7
Africa	434	577	5.9	666	2.9	675	0.7
S. America	806	830	0.6	976	3.3	1,014	1.9
Mid-East	364	554	8.8	682	4.2	713	2.2
Former USSR	3,315	3,525	1.2	3,660	0.8	3,299	-5.1
China	1,482	1,871	4.8	2,374	4.9	2,563	3.9

\* Notes: 1) Emissions data in this table includes only those from energy use.

2) Annual average change rate (%)

3) The data for the OECD, USA, Japan, and EU15 are 1993 data, so annual average change rate are also calculated during the period 1990-93.

4) EU 15 includes Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, Netherlands, Portugal, Spain, Sweden, and the UK.

5) Asia does not include China

6) non-OECD Europe includes former Eastern European countries like Poland, Hungary. But former East Germany is included in Germany.

\* Source: OECD, *OECD Environmental Data Compendium 1995, 1995*

a significant percentage of the growth in global carbon dioxide emissions in the next two decades.

Thus, developed countries argue that without binding, developing countries, global warming cannot be prevented, and that unilateral reduction of emissions in developed countries would cause a deterioration in the international competitiveness of their industries.

On the other hand, developing countries insist that the current global warming problem has been caused by developed countries which have emitted a lot of greenhouse gases so far. Moreover, they argue, even with the high projected growth in emissions in the developing world, per capita emissions in these areas will still be well below those in the developed world.

*Differences between the EU and the U.S.*

**E U:** EU is taking a strong position in reducing emissions of greenhouse gases because the EU countries are confident that their economies will not be damaged by the reduction of emissions by 15% or more by 2010. The EU has already achieved to a large extent the industrial adjustment toward an energy-saving and less-fuel-burning structure. In fact EU emissions have been showing diminishing trends since the early 1990s.

**U.S.:** There are more energy consuming industries in the U.S. than in the EU and the energy consumption per capita is highest in the

world, thus making it difficult for the U.S. to reduce emissions at a fast rate in the short run. That is the reason why the United States cannot take a strong position in reducing emissions. Strong lobbying from industries which emit enormous amounts of greenhouse gases like the mining and auto industries also makes it difficult for the U.S. government to agree to rapid emission reduction.

*Outlook*

**T**he outcome of the Kyoto Conference is in doubt at present since the gaps in the three positions are still too big to induce a consensus of opinion. If the nations try to reach an agreement by first focusing on the level of a greenhouse target or the timing of such a target, they are unlikely to reach an agreement, because it will be unclear to nations how to reach their targets in a timely and cost-effective manner.

The more likely alternative is to bring nations together to reach agreement on a mechanism that invites the participation of all nations over time; a mechanism that offers the flexibility to manage scientific uncertainty and changing costs effectively over time. Under that proposal, nations would adopt legally binding pollution "budgets"—multi-year cumulative targets for limiting greenhouse gas emissions over time. **VIP**

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〈Table-2〉 Energy Consumption Per Capita, 1993

	World Average	USA	Japan	Germany	UK	Russia	Korea	China
Consumption per capita	59	317	141	170	164	203	102	25
Change Rate (1973-1993)	6	7	24	n.a.	7	n.a.	325	110

\* Source: The World Resources Institute, World Resources 1996-97, 1996.