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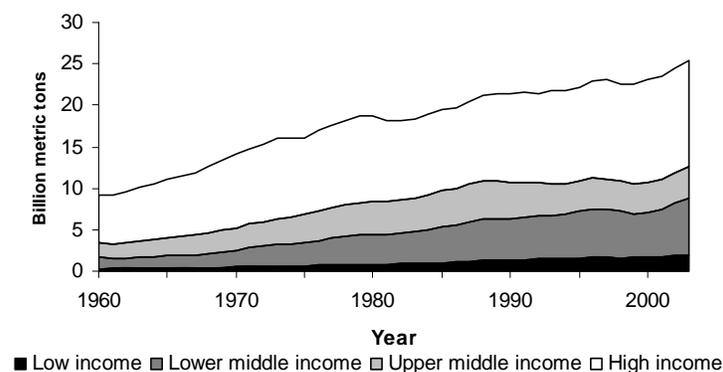
“Little Green Data Book 2007”

Carbon dioxide emissions on the rise, warns World Bank publication

- CO2 emissions are 16 percent higher than in 1990
- Rich countries off track with Kyoto commitments
- Fossil fuels are the main sources of emissions in rich countries and emerging economies
- Deforestation and land use change are driving forces in the developing world

NEW YORK CITY, United Nations, May 8, 2007—Carbon dioxide (CO₂) emissions – the principal man-made cause of global warming – continue to rise, with the world producing today 16 percent more CO₂ than in 1990, according to the *Little Green Data Book 2007*, launched today on the occasion of the 15th Session of the United Nations Commission on Sustainable Development (CSD-15), which is focusing its deliberations on issues of energy and climate change.

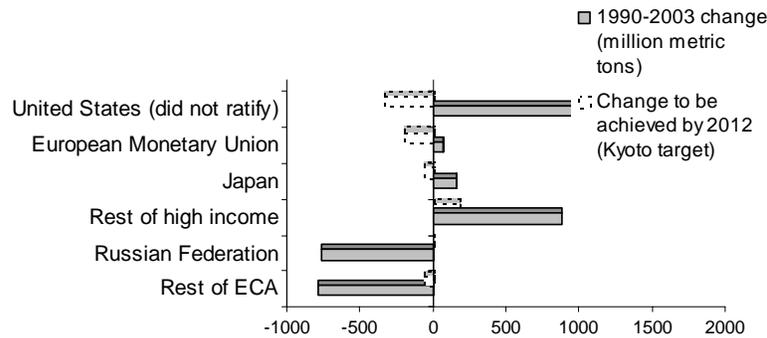
According to this year’s edition of this annual World Bank publication, emissions from fossil fuels and cement manufacturing today (the most recent comprehensive data are for 2003) are originated in equal shares from the industrialized and the developing worlds. In 1960, low and middle income countries only accounted for one third of world emissions.



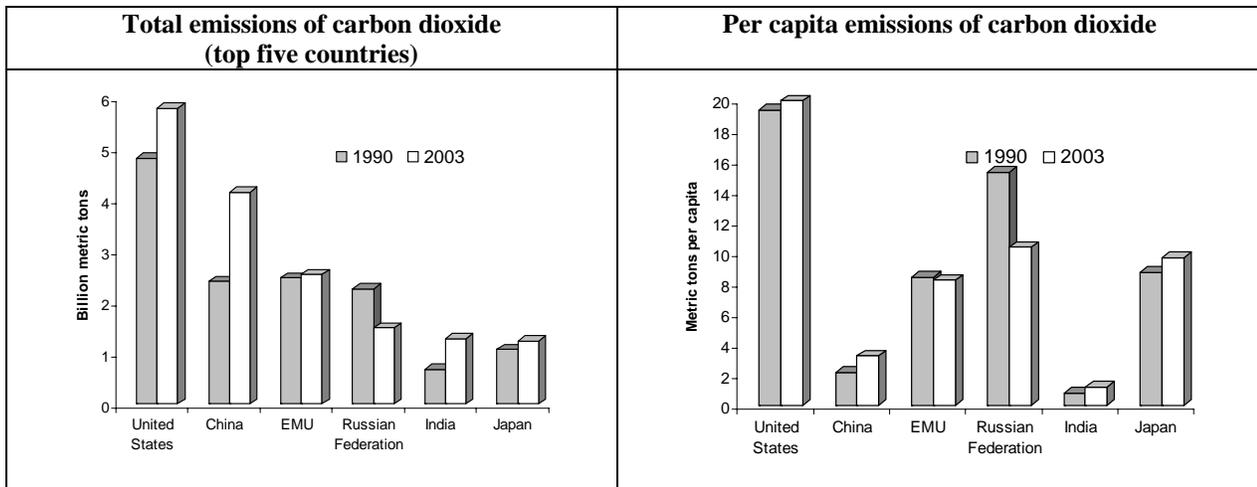
Emissions have been growing faster in the poorer countries, the report says, especially in East and South Asia. But the upward trend is also a feature of high income countries. The United States and Japan show very high increases in CO₂ emissions: 20 and 15 percent respectively between 1990 and 2003. The European Monetary Union countries grew 3 percent. As a group, rich countries are largely off-track with respect to the Kyoto commitments, which established an average reduction of 5.2 percent from 1990 levels by 2012. The only

exception is constituted by the countries of Eastern Europe and Central Asia, where emissions have gone down owing to the recession of the 1990s.

Kyoto Annex I countries (change in emissions)



According to the report, among the group of developing countries, China and India stand out as major emitters. Carbon dioxide emissions in China have increased by 1,700 million tons between 1990 and 2003 (73 percent more), and in India by 700 million tons (88 percent more). While contributing heavily to the world’s total, emissions from China and India are very low in per-capita terms. The average Chinese still emits 16 percent of the average citizen from the United States, and the average Indian emits 6 percent of the United States average.



Carbon dioxide emissions stem mainly from the combustion of fossil fuels and the manufacture of cement. The *Little Green Data Book 2007* shows that this is true especially for industrialized countries and a group of fast growing developing economies, such as China and India. The report says that fossil fuels (i.e. oil, natural gas, or coal) are used to generate 66 percent of electricity worldwide. In the Middle East, the share of fossil fuels in electricity generation is 93 percent, and in East Asia and the Pacific and in South Asia it is 82 percent. At the other end of the spectrum is Latin America and the Caribbean, with 38 percent of its electricity produced from fossil fuels.

“Energy policy will play a crucial role in determining future emissions,” said **Warren Evans, Director of Environment, World Bank.** *“Technologies are already available to minimize emissions in the energy sector. They include the use of ultra-efficient coal-fired plants, the use of natural gas and advanced renewable energies.”*

In the developing world, greenhouse gases emissions are mainly originated from agriculture and land use changes such as deforestation. For example, a recent report titled *“Indonesia and Climate Change”* and published by the World Bank and the British government, shows that deforestation puts Indonesia as the world’s third largest

emitter after the United States and China. (DFID and World Bank, “Indonesia and Climate Change”, Working Paper on Current Status and Policies, March 2007)

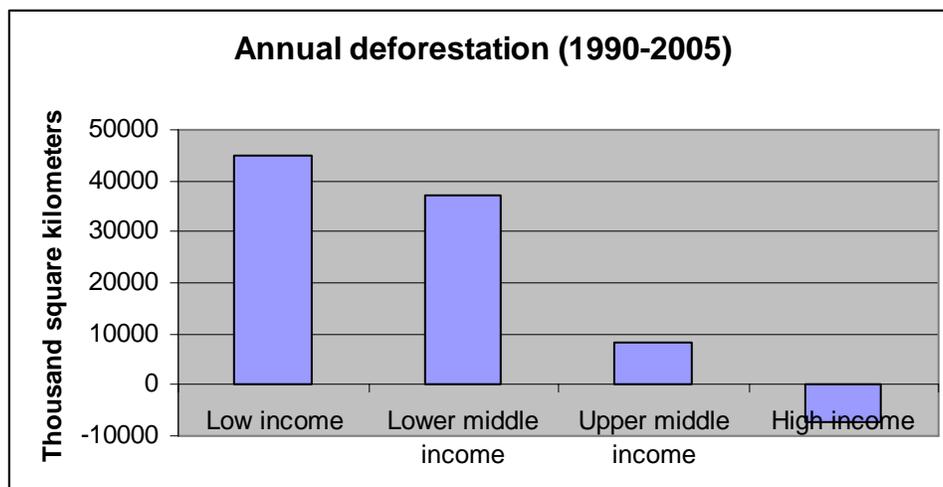
“On average, land use change, forestry, and agriculture account for more than half of the emissions of greenhouse gases in developing countries, compared to 10 percent in industrialized countries,” added **Evans**. *“In order for a post-Kyoto climate change agreement to work, developed and developing nations should take into account the benefits of avoided deforestation and create the necessary financial mechanisms to transfer resources to countries that effectively protect their forests.”*

Speaking at the publication launch, **Mark Radka, Chief, Energy branch, United Nations Environment Programme (UNEP)** said, *“The Little Green Data Book highlights the need to reverse the alarming trend of continued growth in greenhouse gas emissions. Fortunately we seem to be witnessing a growing recognition of the problem and an increasing willingness to take action. By providing such a wealth of information, the Little Green Data Book can only help stimulate such interest.”*

Jacqueline Cote, Senior Advisor Advocacy & Partnerships, World Business Council for Sustainable Development (WBCSD) said at the launch that, *“The Little Green Data Book 2007 confirms the need for rapid and radical changes in the global energy system. Such data not only promotes mutual understanding between business and non-business stakeholders, but supports progressive business’ commitment to partner with governments in developing and implementing energy-related measures that are benchmarked against the threefold objectives of competitiveness, energy security, and environment.”*

Deforestation and land use change are driving forces in the developing world

The *Little Green Data Book 2007* shows that deforestation has essentially been a feature of the poorer countries. Between 1990 and 2005, nearly 45,000 square kilometers of forest were lost in low income countries (corresponding to an annual deforestation rate of 0.5 percent) and 38,000 square kilometers in lower middle income countries (annual deforestation: 0.16 percent).



“Deforestation is not only a cause of increased carbon dioxide emissions,” according to **Kirk Hamilton, Lead Environmental Economist, World Bank, and lead author of the report**, *“but it is in itself a consequence of poverty. Tropical rain forests are diminishing at an alarming rate because of the human need for food and demands for timber, energy, minerals, and other resources. Forests host at least half of all life forms on earth, and as deforestation continues, the biodiversity of the planet is being seriously affected.”*

Hamilton concluded that, *“There is growing recognition that wise forest management is critical to sustainable development, particularly where the local or national economy is based directly on the use of forest resources. In addition, forest ecosystems have major impacts on soil, water, and coastal marine productivity over very large*

areas. They also have a significant influence on the global carbon cycle, which plays a crucial role in local and global climate regulation.”

Reducing deforestation partly entails providing access to electricity to local communities. In Sub-Saharan Africa, electric power consumption per capita is 550 kWh, which is seven times smaller than the average for high income countries, where electricity consumption per capita is 3,454 kWh. Better access to electricity, in turn, will also mean lower reliance on traditional fuels. Currently, wood fuels are still the primary source of energy for approximately 2 billion people in poor countries. Solid biomass is associated with respiratory problems caused by indoor smoke. Most of the victims are infants, children, and women from poor rural families. Acute respiratory infections in children and chronic pulmonary disease in women are a common feature.

According to the report, in Sub-Saharan Africa, 56 percent of total energy use comes from traditional biomass. If one ranks countries of the World, the top 20 are all African countries, with the exception of Nepal (fourth in the list), Haiti (eleventh) and Myanmar (twelfth).

Top-20 users of traditional biomass fuels	
Country	Use of traditional biomass (% of total energy)
Congo, Dem. Rep.	92.5
Tanzania	91.6
Ethiopia	90.4
Nepal	86.8
Mozambique	84.1
Nigeria	80.2
Sudan	79.2
Zambia	79.1
Cameroon	77.8
Kenya	74.1
Haiti	74.0
Myanmar	73.4
Togo	70.6
Ghana	69.1
Benin	65.6
Cote d'Ivoire	64.9
Angola	64.7
Zimbabwe	63.8
Congo, Rep.	61.7
Gabon	58.8

About the report:

In its eighth annual edition, the World Bank's *Little Green Data Book 2007* is a pocket-sized quick reference on key environmental and development data for over 200 countries, based on the *World Development Indicators 2007*. Country, regional, and income group profiles provide a baseline for comparison on the state of the environment and its linkages with the economy and people.

For more information, please visit:
www.worldbank.org/environment/data