

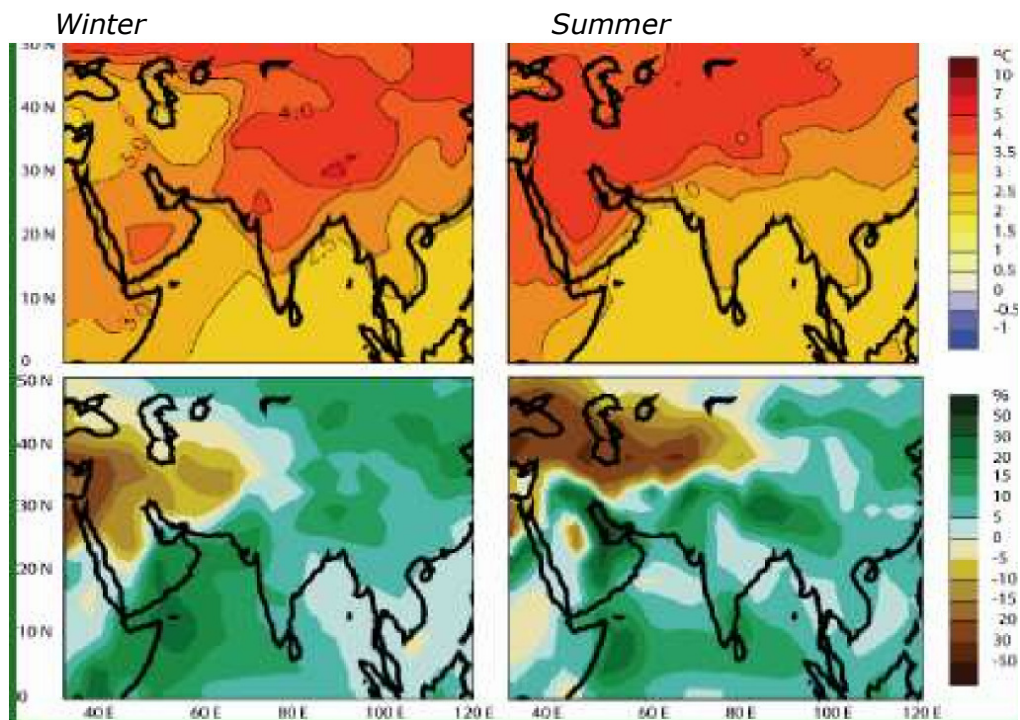
Climate Change: a major challenge for development

By François MOISAN, Executive Director of Strategy and Research, ADEME, France

"Scientific researches and figures drive the international negotiations and scientists call upon the government to take actions."

The concentrations of CO₂ and other greenhouse gases have increased sharply, particularly in the last part of the 20th Century. There is a strong correlation between CO₂ and temperature; temperature increases with CO₂. IPCC estimated an increase of 1°C in average global temperature in the last century. The increase in temperature varies from region to region.

IPCC has made some scenarios on "what could happen in future". According to their report, temperature will increase (up to 4°C) in the Himalayan and Central Asian regions. Therefore, climate change and global warming poses serious drought threats in Central Asia. Melting of glaciers in the Himalayas will impact 9 river basins and 1.3 billion people. It may contribute to 'Glacier Lake Outburst Flood' (GLOF) in many parts of the region.



Picture 1: Climate change in Asia: warming higher in Himalayan region (Source: IPCC 2007)

The developed countries and China are mainly responsible for the greenhouse gases emissions. Distribution of world CO₂ emissions from energy use (2005) is shown in the chart below:

Distribution of world CO2 emissions from energy use (2005)

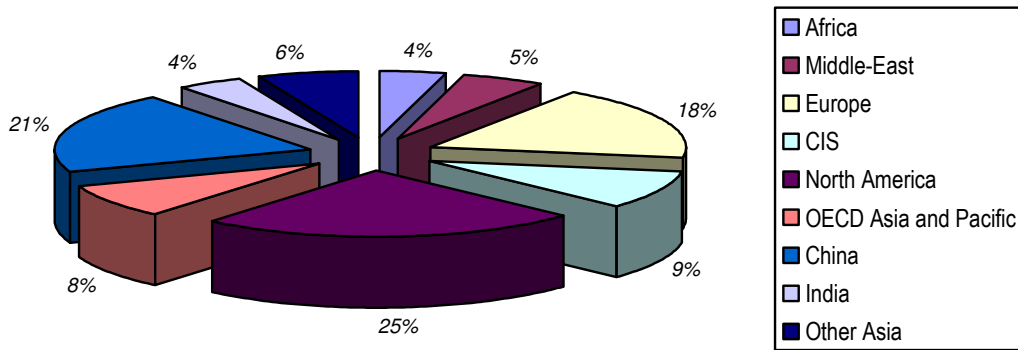


Figure 1: Distribution of world CO2 emissions from energy use (2005)

If we look at the emissions per capita, there are strong discrepancies in different part of the world. USA, China, Russia, India and Japan are the major emitters of CO₂ in 2005, in respect to energy use.

Energy related CO2 emissions per capita

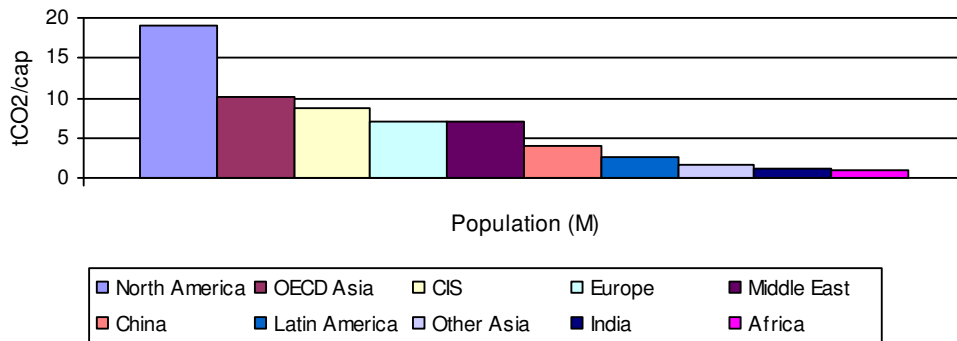


Figure 2: Energy related CO₂ emission per capita

Similarly, even in Central and South Asia there is large discrepancies and variance in energy consumption. The per capita emission of China, Mongolia and Uzbekistan is as high as 4.1, 4 and 4.2 tons of carbon dioxide. In contrast, per capita emission of Afghanistan and Nepal is as low as 0.1 and 0.2 ton of CO₂, respectively.

CO2 emission per capita in Central and South Asia

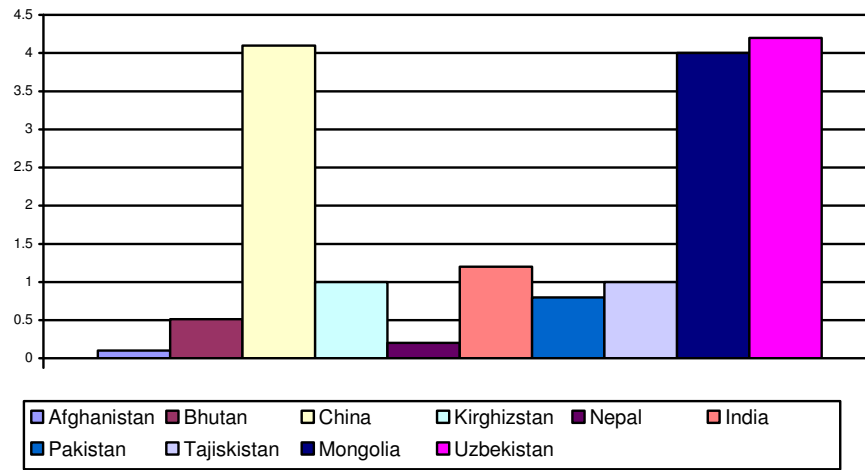


Figure 2: CO₂ emission per capita in Central and South Asia

Mr. Moisan concluded by saying, "Acting to mitigate emissions is urgent, but adaptation will be necessary."