



World Climate

Negotiating a Global Climate Agreement using the C-ROADS Climate Policy Simulation
Prof. John Sterman
MIT Sloan School of Management

CONFIDENTIAL

Briefing for Upcoming Climate Negotiation

TO: *Other Developing Nation* Negotiators at UN conference on Climate Change
SUBJECT: Our negotiating goals

You head the delegation representing all developing nations other than China and India at the upcoming climate change negotiations (Bangladesh, Pakistan, and the nations of Africa, Central and South America, southeast Asia, the Middle East, and the island nations of the Pacific, Indian Ocean, and Caribbean).

Your goal is to achieve the best outcome for the nations you represent. The educated classes in our nations believe climate change is real and understand that human activity contributes significantly to it. We also understand that we will be most adversely affected by climate change: projected increases in sea level will displace hundreds of millions of our people, and some nations, such as low-lying islands, will simply disappear. Many of our people live in poverty, and are highly vulnerable to the drought, disease, flooding and ecological disruption caused by climate change. Climate change threatens our survival as nations. However, as the poorest nations of the world, we do not have the capital either to mitigate our emissions or adapt to climate change. Reaching an agreement to limit climate change is critical for our future, but there is little we can do ourselves, since our total energy use and greenhouse gas (GHG) emissions are such a small fraction of the world total. Like people everywhere, we want to live in a healthy environment, but we suffer from great poverty. For many of our people, a healthy environment means being able to feed, clothe, and house our families, to have a chance for a decent job, and to be free of malaria, dengue, cholera and other diseases long eradicated in the rich nations.

The developed nations resent and fear the rapid economic development we are now, finally, beginning to enjoy, and believe they can use a global climate agreement to slow our growth, limit markets for our products, and constrain our growing diplomatic and military influence around the world.

As we learned at the 2009 and 2010 climate summits in Copenhagen and Cancún, the developed nations will pressure us to reduce our GHG emissions because our emissions are growing faster than theirs. However, their emissions per capita are far higher than ours (US emissions per capita are an astounding 12 times higher than India's and even higher relative to those of Africa). Any agreement that puts the burden of limiting climate change on us is not acceptable. We simply cannot afford the investment required for either mitigation or adaptation.

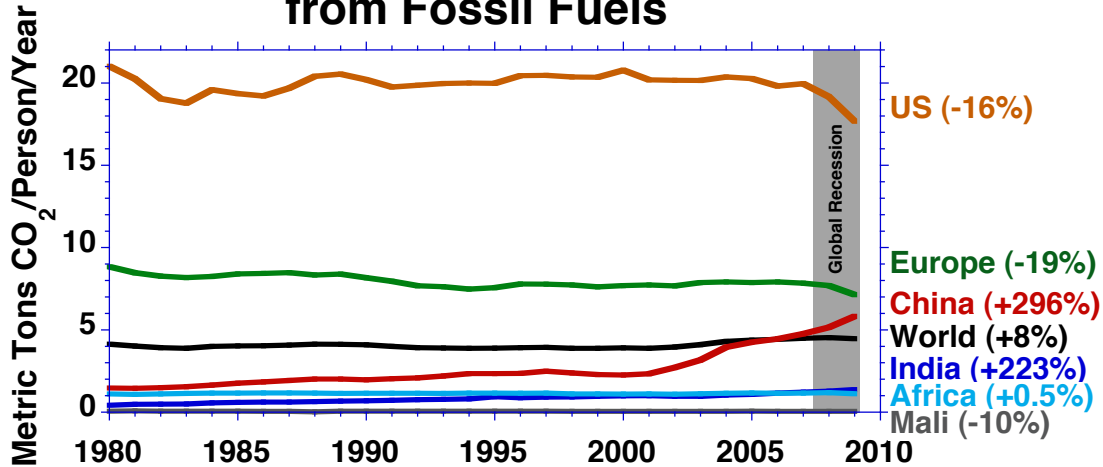
The developed nations of the world created the climate crisis, and must take responsibility for their past actions. Nearly 80% of the total CO₂ released by burning fossil fuels since the start of the industrial revolution came from the developed nations. These nations used that energy to build their economies and enrich their populations, often by exploiting our people and natural resources. The developed nations will demand that we cut our emissions before we have the chance to reach even the level of economic development they now enjoy, and while many of our people continue to live in poverty. We are prepared to do our share, but the rich nations of the world must agree to significant action, commensurate with their past contribution to the problem. We will not pay the price for their past emissions.

We also have an opportunity to limit our GHG emissions through REDD policies (Reductions in Emissions from Deforestation and land Degradation). Our nations contain most of the world's remaining tropical forests, and, unfortunately, there is substantial deforestation in these areas. Programs to protect the forests can reduce our contribution to global CO₂ emissions. We should be allowed to count reductions in deforestation and increases in afforestation (planting trees in previously deforested areas) towards the emissions targets we agree to in any treaty, and the developed nations should pay us to do so.

On the reverse of this page you will find some data that may be helpful in your negotiations. Good luck!

The graph below shows per capita CO₂ emissions from energy use (primarily fossil fuels) for the world and selected nations/regions. Percentages are the total change for the period 1980-2009. CO₂ emissions per capita in the US and Europe are far higher than world averages and far higher than emissions in the developing and less-developed nations. For example, US emissions per capita are roughly 3 times higher than those in China, 12 times higher than those in India and nearly 16 times higher than in Africa. The imbalance is far worse for the least developed nations. For example, US per capita emissions are more than 300 times greater than those of Mali. The developed nations generate more than half of global CO₂ emissions from fossil fuel consumption. With less than 5% of the world's population, the US alone generates 22% of global emissions.

World per Capita Carbon Emissions from Fossil Fuels



Source: DOE/EIA

The graph below shows cumulative CO₂ emissions from the use of fossil fuels from 1900 to 2010. The vast majority of all the CO₂ released into the atmosphere over this period came from the developed nations of the world (about 80%). Therefore nearly all the warming observed so far was caused by these nations. Under the Business As Usual (BAU) scenario (IPCC A1FI), the share of cumulative emissions from our nations is projected to rise throughout the remainder of this century. However, cumulative emissions from the developed nations will still be more than half of the total by 2050, and roughly 45% by 2100. Since CO₂ remains in the atmosphere for roughly a century, most of the warming, sea level rise and other impacts of climate change we will experience in the 21st century will be caused by the emissions of the rich nations.

Cumulative CO₂ Emissions from Fossil Fuel Combustion (GtCO₂)

