

## THE UNITED NATIONS' DILEMMA

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Western countries are engaged in one of the greatest economic policy experiments ever conducted during peacetime. In the midst of a major recession, the United States, Canada, Europe, Japan and Australia, to one degree or another, are implementing climate policies in an attempt to change the very foundation upon which economic prosperity has been built. They are using the legislative, regulatory and spending powers of the state in an effort to shift toward carbon-neutral, nuclear-free economies. Importantly, however, this is not to be construed as a shift to a carbon-neutral, nuclear-free world.

The risks associated with these policies are several:

1. It may be impossible to use the powers of the state to bring about the desired end – an economy that greatly reduces reliance on fossil fuels while eschewing nuclear energy, as nuclear energy is not considered by many as a viable alternative to fossil fuels.
2. The cost to the economy may be too great: it is possible that the economy spirals downward and everyone is made worse off. Not only do per capita incomes decline but health, life expectancy and other measures of well being decline, with the least well off in society suffering the most.
3. Given that predictions of climate change are based solely on computer models, and not observational evidence, it is possible that projections of global warming are wrong.
4. Even if projections from climate models are correct, the world might actually be a better place because it is generally warmer. Evidence from the Medieval Warm Period (MWP) and the Little Ice Age (LIA), as provided in the writings of Brian Fagan, Emmanuel Le Roy Ladurie, Jared Diamond and many others, indicates that there were more crop failures, disease and general misery during the LIA than during the MWP.

In February 2010, a group of climate economists and policy experts met at Hartwell House, Buckinghamshire, England, under the auspices of Oxford University and the London School of Economics to reexamine global climate policy (Prins et al. 2010). The background to the meeting was the failure of countries to agree to limit global emissions of CO<sub>2</sub> at the 15<sup>th</sup> Conference of the Parties to the UN Framework Convention on Climate Change (UN FCCC) at Copenhagen in late 2009. The economists recognized that fossil fuels are both too cheap and too expensive. They are too cheap because they impose a global externality by way of CO<sub>2</sub> emissions that lead to climate change, but they are also too expensive because many poor people lack access to sufficient energy to enable them to escape poverty.

*The Economist* (September 25, 2010, p.117) recently reported that, in 2009, 1.44 billion people lacked access to electricity and all but three million lived outside the rich developed countries. Worse yet, some 2.7 billion still cook their food on inefficient stoves that use dung, crop

residues and fuel wood. It is estimated that perhaps 2 million people die prematurely each year because of health problems associated with biomass-burning stoves (p.72). Collection of biomass for burning occupies much time (mainly of women and children), robs cropland of important nutrients that can only partly be replaced by artificial fertilizers from offsite, and causes deforestation.

One-quarter to one-third of the world's population needs to be provided with electricity and high-density energy, such as can currently only be found in fossil fuels, so that they can live decent lives and have some hope that their children will lead a better life than they. It would be immoral to deny the poor the ability to develop by curtailing their access to cheap energy, all in pursuit of an environmental objective that only interests one billion rich people.

### **The UN Dilemma**

We now have a *huge dilemma*: We can pursue the rich world's environmental climate objective only by denying developing countries the cheap energy needed for economic development. And make no mistake, there are sufficient fossil fuels and they can be made available cheaply enough to drive economic development of the least developed nations.

The problem is not lack of resources; it is the obstacles that both rich and poor countries put in the way of exploration, development, transportation and distribution of energy. Rich countries block exploitation of all sorts of natural resources on the grounds of their potential adverse environmental impacts, while poor governance, corruption and failure of rule of law hinder all aspects of the energy supply chain, resulting in huge waste. Sources of energy are plentiful enough to drive economic development, and they can be made available at low cost to developing countries. The problems are a lack of will to do so and the fact that the energy sources are hydrocarbons.

*The Economist* (September 25, 2010) also had a lead article pertaining to the UN's Millennium Development Goals (MDGs) that, among other targets, aims by 2015 to halve the number of people living below \$1.25 per day. That target and other MDG targets seem to be within reach because of economic growth in China. Despite this, many people continue to live in abject poverty. Interestingly, the UN's MDGs do not talk about economic development, but economic growth is pretty well the only way to meet the MDG's targets. And economic development cannot occur without energy – vast amounts of which are required when we consider that one-quarter to one-third of the world's population lacks access to electricity. High-quality, high-density energy, which can currently only be found in fossil fuels, is also needed so that they can live decent lives rather than having to die prematurely from pollutants associated with low-density forms of energy, such as burning of crop residues, peat, et cetera. It would be immoral to deny the poor the ability to develop by curtailing their access to cheap energy.

The dilemma is of course that, through the United Nations, the rich countries have agreed to pursue policies of economic development in poor countries, so that their standards of living converge to those of the developed world. But they have also agreed, via the UN FCCC, to decarbonize the global economy. These objectives are incompatible. China and India recognize this all too well, which is why they refuse to allow rich countries to seduce them into limiting

their greenhouse gas emissions. The incompatibility between these goals led to the Copenhagen debacle.

### Heads in the Sand: The Ostrich Effect

What has been the response of the developing countries to the aforementioned dilemma? Surprisingly, rather than focus efforts on helping poor countries access sources of energy to enable the economic growth required to adapt to the negative effects of climate change, rich countries are acting as if there is no dilemma whatsoever. They are ramping up efforts to decarbonize their own economies while continuing to threaten and cajole developing countries into doing the same. The developing countries have simply rejected such efforts, continuing to expand their energy consumption and CO<sub>2</sub> emissions as fast as they can. China is in the forefront, with India coming on and others likely to follow in the not-too-distant future.

Consider the evidence. Given lack of adequate data on CO<sub>2</sub> emissions by country, in Figure 1, I provide a graph of coal consumption for selected industrial countries. Coal is primarily used for generating electricity and making steel. Coal consumption by the U.S., Russia and Japan has remained relatively flat over the period 1990-2009, while that of Germany declined slightly, mainly because of unification and the closing of inefficient coal-fired power plants and steel factories in the eastern part of the country. Indian consumption has risen slowly and should overtake U.S. consumption within the next several years. However, Chinese consumption of coal has increased some threefold since 2000.

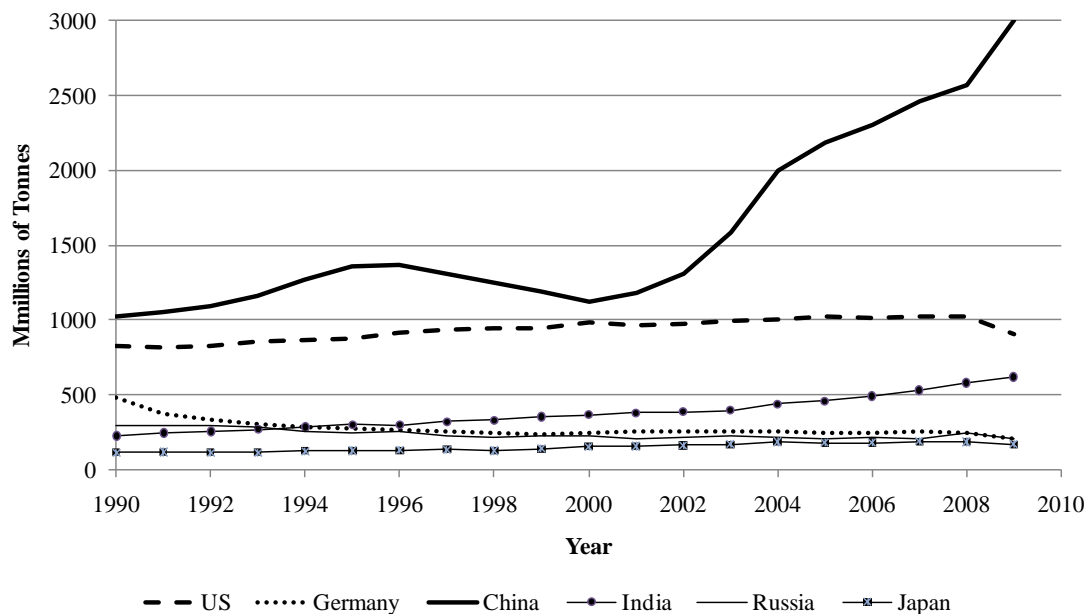


Figure 1: Coal Consumption, Selected Countries, 1990-2009

The same picture emerges if you take CO<sub>2</sub> emissions from coal and installed generating capacity, as indicated in Figures 2 and 3, respectively. Global emissions of CO<sub>2</sub> from coal consumption have risen rapidly since 2000, mainly as a result of Chinese emissions. Indian emissions have risen slightly over the period 1990-2009, U.S. emissions have stayed flat, and

European emissions have declined because of the decline in coal consumption in Germany and also in the United Kingdom (which shut down its coal mines in the early 1990s). At the same time, installed generating capacity in most countries has remained relatively unchanged over the period 1990-2007, with the exception of the United States and China. U.S. capacity has increased by some 260 GW (or 36%), while that of China increased by a whopping 578 GW (519%) and India (not shown) by 84 GW (210%). Notice that Canada's generating capacity is about the same as that of Germany; Canada is a larger exporter of hydropower to the U.S. while Germany imports power from other European states.

One thing is abundantly clear. No matter what rich western countries are doing about CO<sub>2</sub> emissions, global emissions of CO<sub>2</sub> will continue to rise inexorably. Nothing the Americans do, nothing the Europeans, nothing the Japanese do can prevent global warming. Consider this: In just over two years, the *increase* in Chinese emissions of CO<sub>2</sub> from coal generation alone exceeds the emissions of greenhouse gases, measured in CO<sub>2</sub> equivalence, of the entire Canadian economy. China is currently adding 1000 MW of installed coal-fired generating capacity every week, and Chinese consumption of coal in 2009 exceeded the total consumption of Germany, Russia, India, Japan and the United States combined! Despite this, China's generating capacity lags that of the United States by more than 30 percent, although total generation of electricity lags that of the U.S. by only about 20 percent, because the U.S. imports electricity from its neighbor, Canada, while China has no such option.

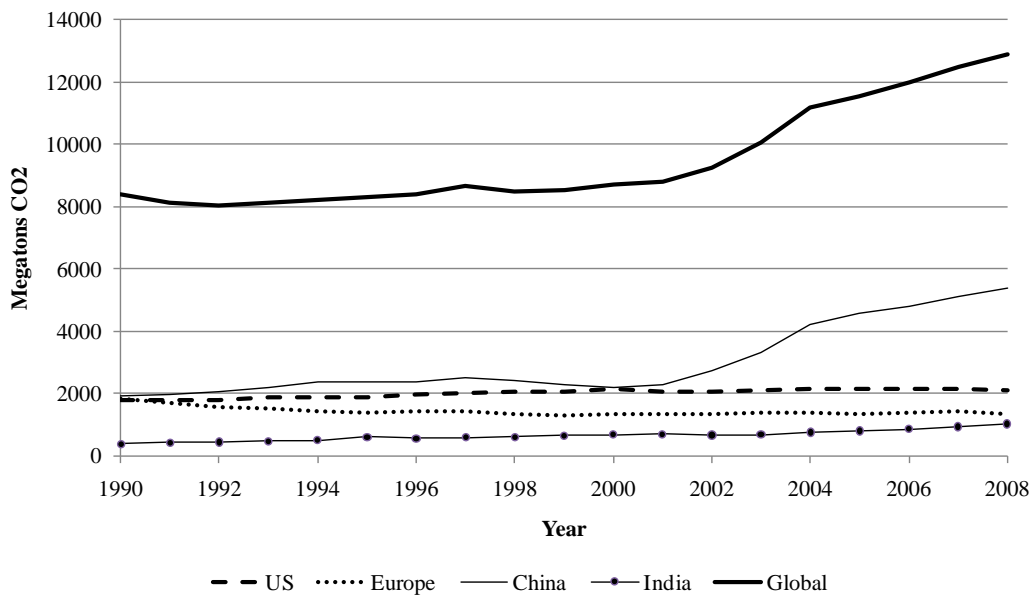


Figure 2: CO<sub>2</sub> Emissions from Coal Consumption, Selected Regions, 1990-2008

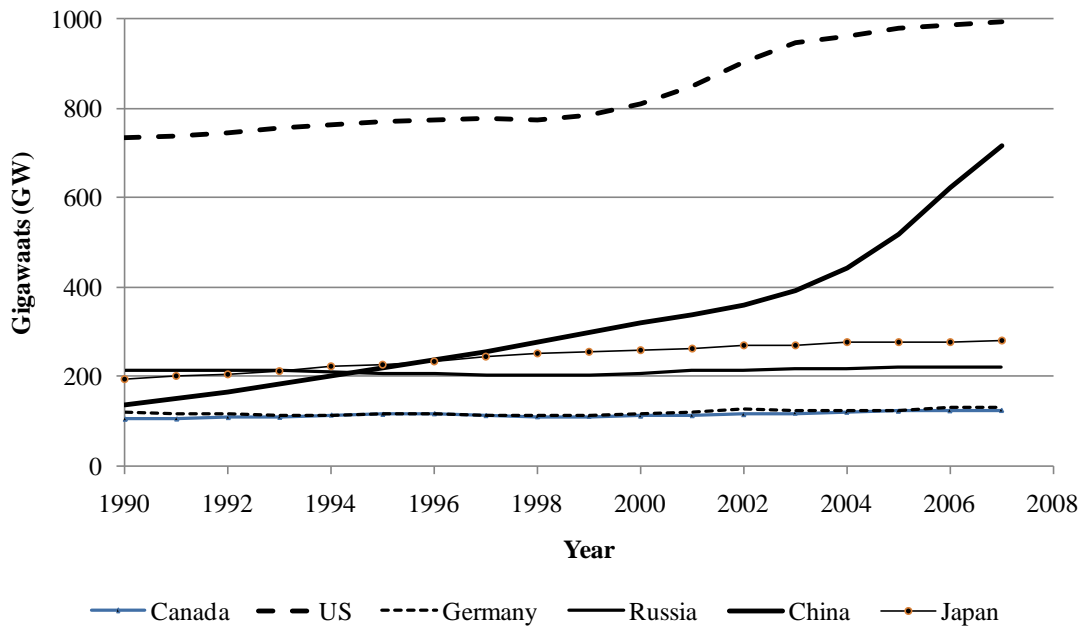


Figure 3: Installed Generating Capacity, Selected Countries, 1990-2007

The response of rich nations has been to stick to the ill-advised UN FCCC Kyoto process as the roadmap to follow, and attempt to impose it upon the rest of the globe. In September 2010, U.S. Senators again introduced a bill requiring a Renewable Energy Standard (RES) that would require 3% of electricity to be generated from renewable sources by 2012 and 15% by 2021. Similar to the generous feed-in tariffs provided by the province of Ontario, these provide huge subsidies to wind and solar companies. The costs to the Ontario treasury of its feed-in tariff program are estimated at \$2.4-\$2.6 billion per year, although budgetary pressures will cause politicians to pass costs onto electricity consumers in the form of large rate hikes. In terms of climate change, the Ontario program reduces emissions at a cost of hundreds of dollars per ton of CO<sub>2</sub> (when CO<sub>2</sub> emission credits are trading for about \$25 per tCO<sub>2</sub> in Europe and \$0.10/tCO<sub>2</sub> on the Chicago Climate Exchange), but does absolutely nothing to forestall global warming because of what is happening in China, India and elsewhere. The same can be expected of the U.S. program and similar programs in Europe, where targets require countries to a 20% RES in the production of electricity by 2020.

Despite the fact that none of these programs, even collectively, can impact climate change, why do governments continue to pursue them? One reason is the mistaken notion that these large subsidies will lead to greater employment and the development of a renewable energy sector that is a global leader. Every country believes it will be the global leader in the development of wind turbines and/or solar panels. However, research indicates that public funds directed at the renewable energy sector actually reduce employment by crowding out private sector investment or public infrastructural investments elsewhere in the economy (e.g., investments in transportation infrastructure that reduce costs of moving goods and people) (Álvarez et al. 2009; Morriss et al. 2009). Indeed, it appears that the main winner from efforts by countries to expand wind and solar output are the Chinese. China currently controls the supply of rare earth

minerals which are used to make solar panels and parts of wind turbines, among other things (*The Economist*, October 2, 2010, p.64). Recently, China restricted exports of these minerals as it desires to export the manufactured products in which they are found (Humphries 2010). China gains from rich-country subsidies to solar and wind producers.

The other reason for pursuing the Kyoto roadmap comes from environmental groups and the media, which together have convinced politicians to do something about reducing greenhouse gas emissions and the so-called carbon footprint. Doing something, anything, is not always wise. Economists have long known that governments cannot pick winners and, worse, government subsidies can lock-in technologies that become a hindrance to more efficient energy use rather than a solution. An example is biofuels.

Production of energy crops raises land and food prices and leads to deforestation (Searchinger et al 2008). Ethanol from corn and biodiesel from canola actually increase rather than decrease greenhouse gas emissions (Crutzen et al. 2008). Biofuels are not competitive with petroleum even when oil prices are at \$150 per barrel, which is why subsidies (or mandates) are needed. When subsidies end, the production facilities and distribution network remain in place, and constitute a sunk cost. Even though the original investors may go bankrupt, production of biofuels continues. The same is true of wind farms and solar facilities. Meanwhile, subsidies to solar, wind or some other renewable option tilts the playing field against new energy sources or technologies that are better at reducing greenhouse gas emissions and improving energy efficiency.

It appears that we may well be in danger of violating the precautionary principle, but not as one might have expected!

## References

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