



## What Role for Biofuels? (related article)

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### Global Warming

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I make here a few pertinent points that bear on the negotiation of Kyoto II which, so far, seems to re-enact the conceptual confusions that marred Kyoto I. Additional comments are directed at other issues raised currently in the debate on appropriate policy response to the Global Warming Crisis.

### A: Appropriate Design of Kyoto II

1. Bringing India and China into a new Kyoto. The idea that they should be in the new Kyoto for PRESENT (current) emissions makes sense but ONLY as part of a package that simultaneously introduces liability for PAST damage by the rich countries. The problem with the old Kyoto agreement was that it confused 2 different issues: past damage and current liability, or what I call the Stock and the Flow aspects of the Global warming issue. The liability for current flows/emissions by India and China was waived because they did not damage the atmosphere in the past (the stock aspect)!
2. So, with the case for exemption for India and China presented as if it was simply a question of letting off two big CO<sub>2</sub> emitters simply because they were underdeveloped --- i.e. there was an implicit or explicit appeal to the progressive taxation principle which does not have today in the US the moral appeal that it carried earlier --- and had not emitted CO<sub>2</sub> in the past the way that rich countries had done, the US Senate would not ratify Kyoto: the "vote" in the Senate was 99 to 1 against! Even the former Vice President Al Gore and President Bill Clinton withdrew from battling for Kyoto in the US Congress; it is doubtful that either of them really had thought the matter through or was willing to expend political capital on the issue.
3. How can then Kyoto II be devised so as to resolve this problem in an analytically correct, and politically equitable, fashion? I propose in my *Financial Times* (August 16, 2006) article, that to bring India and China on board on current emissions, we need to introduce the Superfund idea, from US practice itself, under which the rich countries would pay for past damage.

4. What is however going on politically, and cannot be accepted by India and China, is that they are being asked to accept the flows liability for current emissions WITHOUT the creation of a Superfund for past (stock) damages.
5. In short, not surprisingly, one may note cynically, India and China are being asked to take obligations while the complementary obligation on US, EU and other rich countries is being ignored. I am not surprised that they refuse. We must walk on 2 legs or not at all. [Former President Clinton remarked recently, on Tim Russert's Meet the Press TV show in September 2007, that India had to be brought into Global Environmental obligations, adding that a 4-year old child had fallen into the river in Delhi and had died because of toxic pollutants in the river. Alas, this celebrated "policy wonk" cannot distinguish between Global Warming and domestic pollution.]
6. I should also add that, as for the calculation of the current liability, it should not also be equalized at the margin, but must reflect the shadow cost of ALL emissions currently (minus CO<sub>2</sub> absorption through rain forests, for example). The rich countries have again introduced the self-serving US principle of Prevention of Significant Deterioration (PSD), under which those States which already pollute more are to accept (relative to what a tax on ALL emissions would imply) a lower obligation just because they pollute more. While their quantitative obligations under Kyoto (which even most of the EU did not fulfill) looked larger, in fact they reflected a truncated and "self-serving" bastardization of the full-bodied market principle of charging each State for ALL emissions. So, even on the Flow dimension, the rich countries must move from what is de facto a PSD approach to a full tax on ALL emissions for all.

## **B: Some Problems with Cap & Trade and a Carbon Tax**

1. Cap & Trade is simply the quantitative counterpart of the price instrument, the carbon tax. All that different caps for different sectors in a country do is to segment the markets & therefore allowing trade of caps/permits among them reduces the economic cost of achieving an overall sum of the different caps. Again, if the caps are to be traded within segmented markets only --- e.g. only energy-producing plants can trade among one another their caps --- the reduction in economic cost will be correspondingly less.
2. The key question really is: what is the overall CO<sub>2</sub> emissions cap to be set at? This is the same question as what the Carbon Tax rate should be. Evidently, after the recent Reports on the urgency of the Global Warming problem, we have shifted to thinking of a higher carbon tax than we would have otherwise. The fine Stern report's calculations underline this also. [I imagine, however, that the main reason why public perceptions have shifted towards doing something drastic on Global Warming is the melting of the glaciers and the simultaneous release of the classic French film on Penguins, with the Al Gore documentary providing belatedly an added push. Similarly, the discovery of the hole in the Ozone layer served to

change public perception on the need to eliminate CFCs in the Montreal Protocol. [As a proponent of Free Trade against ceaseless attacks by protectionists and populists, I am continually arguing at an intellectual level, taking care to write in an accessible fashion. But I need and seek the equivalent of Penguins and melting glaciers to win the war! Suggestions are welcome.]

3. But there is a difficult Measurement Problem here. Before a Carbon Tax can be effectively applied, we must know what the CO<sub>2</sub> emissions are for different activities. In some cases like emissions from fossil-fuel energy plants, the discharges are easily observed and measured. But there are countless activities where we just do not know their "carbon imprint". [This is the insuperable problem faced by the proposal that every human being should be given a carbon quota beyond which a carbon tax would kick in: how would one know the carbon imprint from the hundreds of activities of a human being such as walking on carpets, floors, cycling, riding buses, driving cars, eating etc.?
4. The result of the inability to measure carbon emissions from many activities is that we often go by whatever some activist NGOs demand in regard to specific activities, often without any evidence. Thus, some NGOs wanted cut flowers not imported from the poor countries of Africa into London because they argued that trade creates CO<sub>2</sub> emissions, and therefore we should go "local". The British DFID (Department for International Development), no anti-environmentalist agency, commissioned a study which found that cut flowers imported from the much-closer Rotterdam created in fact larger CO<sub>2</sub> emissions per bunch delivered to London because the CO<sub>2</sub> emissions from growing them in Greenhouses were more substantial! Yet, you have NGOs crawling all over aircraft and demonstrating against international trade.
5. Leave that problem aside & let us say we concentrate only on some big, observable & measurable emissions of CO<sub>2</sub>. But even then, we run into the problem that the carbon tax must be equalized net of what is already being done: e.g. countries with big petrol taxes would have lower carbon taxes. Who is going to tell the US that therefore their liability on a carbon tax would have to be higher than that of many foreign countries?
6. In turn, this raises serious questions about the EU desire currently to apply a tariff on countries that do not match the proposed EU carbon tax. This is the French proposal of a few years ago (going back to an original discussion of my own many years earlier). The exact WTO-legality of this proposal is discussed fully in the Bhagwati-Mavroidis paper last year in the *World Trade Review* (2007, Vol. 6(2), attached herewith. But Peter Mandelson has it right: the proposal could degenerate into chaos as the US (whose Congress is also considering similar legislation ironically) turns to similar actions and the rest of the world retaliates, drawing on all kinds of environmental (e.g. that the US and the EU have not paid for a Superfund) and "social values" (e.g. the US has not ratified most of the core ILO conventions) arguments to restrain the EU and US trade, in turn. [In fact, the original Dolphin-Tuna GATT Panel decision over 15 years ago, on which I had been consulted as Economic Policy Adviser (1991-1993) to the GATT Director General Arthur Dunkel, had found in favour of Mexico and against the US

principally because we could foresee the chaos that would break out in this fashion, a lesson that recent WTO Appellate Body rulings have unwisely ignored.]

### **C: Exhortation & Self-Restraint**

1. Given the impracticality of a carbon tax that gets all carbon imprint into the tax net, it makes sense for us to exercise self-restraint where the effect on CO<sub>2</sub> emissions is demonstrable and plausible.
2. Thus, if I turn off the lights or computers when I am not using them, that clearly reduces energy use and therefore CO<sub>2</sub> emissions (even though a purist might say that turning off lights more will wear out bulbs more and therefore create emissions from the manufacture of bulbs, a second-order effect I presume). [The Nobel Laureate William Vickrey, my colleague at Columbia, was a Quaker and a Pacifist, and in fact used to skate his way from the rail station to Columbia daily!] Indeed, as the impressive presentation by Mr. Narayana Murthy of Infosys today shows dramatically, huge savings of energy have been undertaken by numerous such actions in his firm in Bangalore. Indeed, there are tremendous possibilities from such actions by individuals and, equally importantly, by firms. As the "green ethos" spreads and firms also increasingly realize that good citizenship pays off, going green is seen increasingly as a way of avoiding being in the red. Of course, this does not mean that incentives, as produced by a carbon tax or a suitably restrictive overall cap, to reinforce the impetus of voluntary action are unnecessary.
3. But then you have also absurd suggestions, typically from the celebrities. Thus, Sheryl Crow, the wonderful singer, suggested recently that, instead of using 2 pieces of toilet paper, we should use one! My reaction was that my daughter's Rottweiler --- let me assure the Chairman Prime Minister Tony Blair that, contrary to Princess Diana's views, rottweilers can be as charming as she was --- uses none; maybe we should emulate her! Perhaps singers, including Bono, should sing and collect moneys & should leave development and the environment to others better equipped to think through the problem, just as Warren Buffet, who obviously knew how to make enormous amounts of money, decided to give it for altruistic spending to Bill Gates who knows how to spend it effectively.
4. One other point. In the US, there is a certain sense, expressed best by Governor Schwarzenegger, that if there is pain involved in curtailing CO<sub>2</sub> emissions, it will not fly. But we can use technology to continue living the same lifestyle, e.g. he cites his Hummer & argues how he can continue using it because now the new fuel technology will allow him to equip it with an almost zero-emissions engine. [See his brilliant and witty speech on California's environmental initiatives at the Council on Foreign Relations last year; it is available from the Council.] But, is he sure that if you use more batteries, that their manufacture does not create its own CO<sub>2</sub> emissions and environmental waste problems? Would it not be better to forego his SUV (what I call a Socially Undesirable Vehicle) and just use less fuel?

And since higher speeds cause more emissions, how about preventing cars (except for police, fire department and ambulances) from being put on road with engines that can go beyond 75 miles per hour? Putting caps on emissions possibilities on cars does not change your lifestyle; but putting caps on speed possibilities on cars does. There lies the problem! So, one must pause and ask: how far can one go with this technological, no-pain approach?

5. The same question arises in regard to the so-called "offsets". Mr. Gore has been accused of a lifestyle that results in substantial emissions. But he claims that his carbon imprint is zero because he buys offsets, getting others to do the CO<sub>2</sub> saving. My reaction to this is: this argument of Mr. Gore is as if I was to knife Mr. Gore to death and was then to tell the world that my wife was giving birth to a baby and therefore my "population imprint" was zero! If Mr. Gore wants to reduce CO<sub>2</sub> emissions worldwide, let him subsidize others who do so, but that should be in addition to his reducing his own CO<sub>2</sub> emissions, not a substitute for reducing his own emissions.
6. In fact, while the US politicians now talk ceaselessly about Global Warming, one can only doubt if there is seriousness about the need for urgent action when the going gets tough. Thus, it is astonishing that, as part of the Presidential campaign, as gas prices have gone up at the pump, Hillary Clinton and John McCain have promised to reduce the gas tax! How can such irresponsibility be tolerated by world opinion even as the Clinton campaign, in particular, talks a good game on environmentalism? If there is indeed a huge crisis, no short-term, politically-expedient reversals like this can be tolerated. [It is to the credit of Barack Obama that he has refused to endorse this proposal, even if it will lose him votes: this is in keeping with his enormous courage and integrity shown in his solitary willingness to condemn the daily rantings of the popular Lou Dobbs of the CNN against immigration.]

#### **D: Broader Environmental Issues such as Shifting between Fuels**

1. The question of shifting among different fuel sources is even trickier, as we now know. The food crisis accentuated by biofuels shows how we might save on CO<sub>2</sub> emissions, saving many lives in the future, while helping create a virtual famine that kills many here and now.
2. On nuclear power, we have Greenpeace (and the Nobel Peace laureate Jody Williams who earned her Nobel for activism against landmines and has no expertise on the nuclear issue) dead opposed to its spread. Yet, many including its founder Patrick Moore have argued recently ---see his Q&A interview with Fareed Zakaria in Newsweek, titled "A Renegade Against Greenpeace: Why he says they're wrong to view nuclear energy as 'evil' ", updated April 12, 2008 --- that this is an unscientific position, and that Greenpeace is now being run by

people who have no training in the sciences. This has also been my experience at Davos and in other international fora where, increasingly, those who know a field are now surrounded on Panels by ill-informed but impassioned representatives of gigantic NGOs, often founded in the rich countries and whose competence lies in other fields instead, but whose immense funds and PR skills get them public attention whereas the viewpoints of the smaller NGOs, typically to be found in the poor countries, get muscled out).

3. We also now have to re-open the question of the GM seeds. Again, many environmental NGOs oppose their use on the ground that they are Frankenstein foods. But by denying them, we also forego the technology that promises a second Green Revolution. Are we to substitute currently-unproven fears of Frankenstein for the Grim Reaper that promises the near certainty of continuing poverty and food crises in the poor countries?