

Global Warming

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By

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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 CO2 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 CO2 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, appended, 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 CO2 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 CO₂ 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 CO₂ 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 CO₂ 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 CO₂ emissions per bunch delivered to London because the CO₂ 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 CO₂. 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 CO2 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 CO2 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). [See the attached cartoon on how you could use skates instead of driving to reduce CO2 emissions. 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 CO2 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 CO2 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 CO2 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 CO2 emissions worldwide, let him subsidize others who do so, but that should be in addition to his reducing his own CO2 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 Barrack 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

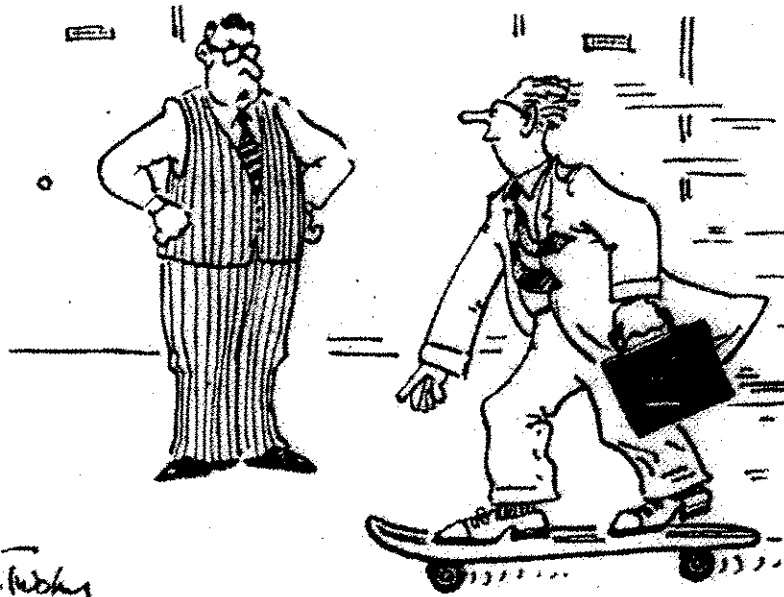
1. The question of shifting among different fuel sources is even trickier, as we now know. The food crisis accentuated by the biofuels shows how we might save on CO2 emissions, saving many lives in the future, while helping create a virtual famine that kills many here and now.
2. On nuclear power, we 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?

Appendix

- Environmental Cartoon
- Introduction to Jagdish Bhagwati and Petros C. Mavroidis, "Is action against US exports for failure to sign Kyoto Protocol WTO-legal?" *World Trade Review*, V6, Issue 2, July 2007.
- Jagdish Bhagwati, "A global warming fund could succeed where Kyoto failed" *Financial Times*, August 16, 2006



Toby

"Isn't it enough to just advocate environmentalism?"

Snipings

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Is action against US exports for failure to sign Kyoto Protocol WTO-legal?

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1. The issue

Since the jurisprudence on *US–Tuna* was overturned by the Appellate Body's *US–Shrimp* decision in favour of the United States, lending legitimacy to action against other nations because of their refusal to conform to the production processes and methods (PPMs) unilaterally specified by a member of the WTO, there has been concern that this has opened the door to all kinds of punitive measures such as the use of trade action, including against the United States itself for not having signed on to the Kyoto Protocol. Thus, in his 2004 book, *In Defense of Globalization*, in the context of an extended critique of the legitimization of such unilateral assertions of PPM requirements and the faultlines opened up by the *US–Shrimp* decision (2004: 153–158), one of us (Bhagwati) argued:¹

The shrimp–turtle decision ... is a dangerous ruling because of the possibility, which bothered the authors of the 1991 GATT report on trade and the environment, that it opens up a Pandora's box. Consider that this finding applies

We would like to thank Bernard Hoekman, André Sapir, and an anonymous referee for very helpful comments. Remaining errors are of course our own.

1 Critiques of demands for including unilaterally defined PPMs as a ground for suspension of market access to products not using the required PPMs has long been discussed by one of us (Bhagwati) in different places. See, in particular, Jagdish Bhagwati and T. N. Srinivasan, 'Trade and the Environment: Does Environmental Diversity Detract from the Case for Free Trade?', in Jagdish Bhagwati and Robert Hudec (eds.), *Fair Trade and Harmonization: Pre-requisites for Free Trade?*, Cambridge, MA: MIT Press, 1996, Volume I; and Bhagwati, 'Afterword: The Question of Linkage', *American Journal of International Law*, 96(1) (2002): 126–134. Bhagwati was also Economic Policy Adviser in 1991–93 to the Director General of GATT, Arthur Dunkel, when the original Dolphin–Tuna Panel decision was taken, rejecting the GATT legality of unilaterally specified PPMs as a way of restricting market access.

fully to the United States, which has failed to sign the Kyoto Protocol on global warming, whereas almost all other nations have. The United States is therefore producing traded products using PPMs that other nations can claim damage the environment.

Not doubting that the US could be targeted for trade action because of its failure to ratify the Kyoto Protocol, the analysis then moved to the politics of such trade action:²

We would in effect be talking about a virtual embargo, as most products use energy in their manufacture! The United States is protected only by its size and its ability as a hegemon to browbeat other nation-states into not passing such legislation [or using executive to take the trade action]. But that leaves a gaping incoherence and cynicism in the world at the inherent asymmetry and injustice of a WTO Dispute Settlement Mechanism that implicitly, even if perhaps unwittingly, favors the powerful.

Since then, this idea – admittedly not developed with the sophisticated legal analysis that is clearly necessary and which we offer here – has been taken up by others. In particular, Joseph Stiglitz, our colleague at Columbia University, has now proceeded to ask for joint trade action against the United States by the EU and Japan, among others.³ And the French Prime Minister, Dominique de Villepin, never far behind in tweaking the American nose, has even followed in Bhagwati's footsteps and proposed such action by the European Union.⁴ It would appear that Peter Mandelson, the EU Trade Commissioner, has dismissed the French proposal as a 'probable breach of trade rules' and, exactly as Bhagwati had suggested, as 'not good politics'.⁵

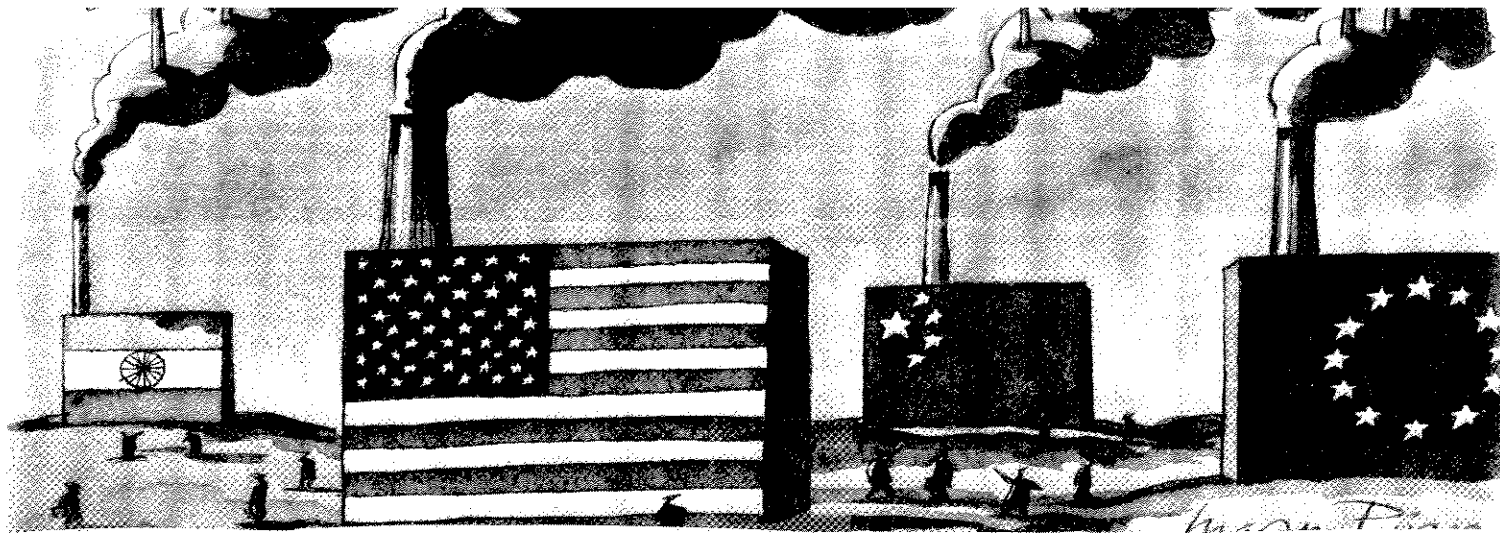
Clearly, the matter needs sophisticated legal analysis, as also a realistic assessment of the politics, of a Kyoto-based action against the United States. In what follows, therefore, we first explore what kind of action the European Union could legally, that is, in conformity with its WTO obligations, undertake against the United States (Section 2), and then move to discuss the policy dimension of an (eventual) US response (Section 3). In Section 2, consequently, we assume that the European Union has decided to move in this direction. In Section 3, on the other hand, we ask the question whether the European Union should be contemplating such actions in the first place: for, even if an action were legally possible, which we

2 Bhagwati, *In Defense of Globalization*, page 157.

3 See both his latest book, *Making Globalization Work*, Norton, 2006, and the website of the Center for Global Development, a Washington DC think-tank, dated 29 September 2006, where the idea is presented by Stiglitz. His rationale for the implementation of the Bhagwati idea is however based on legal confusions between two quite different arguments: the Shrimp-Turtle decision and the argument that the failure to ratify and implement Kyoto amounts to the US using 'hidden subsidies'. See the legal analysis in the text above.

4 The French Prime Minister's proposal was made in mid-November 2006 and immediately drew attention worldwide.

5 See the *Financial Times*, 17 December 2006, titled 'EU Trade Chief to Reject "Green Tax" Plan'.



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COMMENT

JAGDISH BHAGWATI

A global warming fund could succeed where Kyoto failed

Al Gore has been busy returning global warming to centre stage with terrifying warnings of disaster with his best-selling book, *An Inconvenient Truth*, and the popular companion documentary. Tony Blair, the UK prime minister, has joined – even led – the renewed focus on global warming, charging Sir Nicholas Stern, the economist, with solving the problem. Alongside his successful initiative on Africa, this is to be his sure-fire international legacy as he ends his last term in office.

Getting global warming on the radar screen is only half the game, however. The other half has to be the design of policies to address it effectively. The centrepiece of world action has been the 1997 Kyoto Protocol to the Framework Convention on Climate Change. But while it embodied national obligations on carbon dioxide emission reductions and has now been ratified and approved by more than 160 countries, the US has not done so. So, the Kyoto protocol is dead in the water: you cannot stage *Hamlet* without the Prince.

Even though Bill Clinton, then president, and Al Gore, then vice-president, were whole-hearted supporters of the Kyoto accord – Mr Clinton even signed it – they could not get it ratified by the Senate that had united against it by a vote of 95-0 in 1997. When President George W. Bush rejected Kyoto, he was therefore resurrecting a corpse and snuffing it, simply to please his anti-environmental constituents. But despite the presence of many who share the alarm over global warming, the unwillingness of the US Senate to sign on to Kyoto cannot be put down to JS capriciousness. Rather, it reflects a serious flaw in the design of the protocol. When this is understood, the outlines of a better international assault on the global warming problem, which is both more attractive and likely to bring the US on board, become evident. The fatal flaw in the Kyoto protocol

is that it left India and China out of the emission-reduction obligations. Both are major polluters; India still way behind but China closing in on the US. The US Senate could not buy into this exemption of India and China. First, the principle of “progressive taxation” that would leave the poorer countries with little obligation no longer has political salience in the US. Second, the image of these two giants long asleep and snoring has shifted to that of giants astir and spewing out significant levels of CO₂ into the atmosphere, undermining the credibility of those who would exempt them from burden-sharing. So, why were India and China left off the hook?

The answer lies, as often, in analytical confusion and a political fudge. While the emissions of today are substantial and growing for India and China, the emissions of yesterday are mainly by the rich countries. The accumulated fossil fuel CO₂ for 1850-2004 shows the damage attributable to India and China as less than 10 per cent while the European Union, Russia and the US jointly account for nearly 70 per cent.

India and China argued successfully that because they were hardly responsible for the “stock” problem – past damage – they should be exempted from the “flow” obligation – the current damage – at least for now. So, the stock problem was addressed by fudging the solution to the flow problem. The political fudge left Kyoto unsalable. It will remain so unless it is revised to reflect the distinction between the stock and flow obligations and, therefore, the disconnect between the nations that did damage in the past and those that are joining their ranks with a vengeance. How is one to do this?

The stock problem can be addressed by adopting the very technique that the US has used at home to deal with past damage to the environment. Consonant with the American fascination

with torts actions, the US enacted in 1980 the Comprehensive Environmental Response, Compensation and Liability Act, commonly known as the Superfund. Under it, a tax was levied on the chemical and petroleum industries and, among other actions, liability established for people responsible for the release of hazardous waste at closed and abandoned hazardous waste sites. It established a trust fund (which would also receive the payments for past damage under the act) to provide for “clean-up” when no responsible party could be identified.

This principle for dealing with past

It is hard to imagine the US objecting to making nations pay for their total pollution. Such a tax is only a way of creating a missing market

damage makes sense and can surely be applied in the international context. The rich nations, which have been responsible for the overwhelming bulk of the release of CO₂ into the atmosphere in the past, would have to agree to payment of damages into a global warming superfund. These payments could be assessed for a period of no less than 25 years. The estimated damages could reflect the opportunity cost of reducing the CO₂ emissions by a corresponding amount in the next 25 years.

Since “clean-up” does not make sense in the context of global warming, these funds would instead be allocated to researching a variety of CO₂-saving technologies, such as wind and solar energy, and to subsidising the purchase of environment-friendly technologies by the developing countries,

including India and China. Such subsidies would rebound to the benefit of the rich countries paying into the superfund, since their companies typically produce these technologies. So, aside from the global warming superfund being palatable to the rich countries because it reflects a principle already in domestic practice, business support for it can be expected as well.

On the other hand, the flows need to be taxed, just as in the polluter-pays principle. The existing obligations are based broadly on the half-baked principle of “prevention of significant deterioration”, whereby those who pollute more do not have to pay more and only the excess pollution generated by each country is sought to be redistributed more equitably.

Instead, efficiency and fairness require nations to be taxed on their total CO₂ discharge annually. China and India would then have liabilities reflecting their net discharges and the US burden would be significantly higher than that of almost all other nations because it pollutes most. Again, funds collected could be partly added to the global superfund for international uses; the rest could be spent on domestic projects for the same purposes. It is hard to imagine the US, the ideological ally of markets, objecting to this application of the market principle: making each nation pay for its total pollution. The tax is only a way – like selling tradeable permits for CO₂ discharges – of creating a missing market.

There will be differences on how much we ought to spend on preventing global warming. But the difficulties posed by the flawed Kyoto design are gratuitous and can be remedied. It is time to correct them.

The writer, university professor of economics and law at Columbia University and senior fellow at the Council on Foreign Relations, is the author of In Defense of Globalization (Oxford)