

# **Dead in the Water on Climate Change: Reflections on *Hot Air***

**By  
William Leiss  
(With a Response from Mark Jaccard)**

## **Section I: Dreams and Nightmares 26 October 2007**

Fifty years ago, in 1957, Roger Revelle and Hans Suess co-authored what became a famous paper, in which they suggested that humanity may be engaged in an interesting “experiment” with the earth’s climate as a result of anthropogenic carbon dioxide emissions.<sup>1</sup> About thirty years ago, when the report from the U. S. National Academy of Sciences entitled *Carbon Dioxide and Climate* was being assembled, leading scientists were in the process of arriving at an initial consensus that human activity was influencing the climate system.<sup>2</sup> About twenty years ago, in 1987, the Government of Canada had preparations well under way for convening the 1988 Toronto Conference on the changing atmosphere. The 1988 conference statement deliberately referenced the notorious “experiment” idea and marked the point in time at which governments in the industrialized world first formally committed themselves to the idea that a policy response to climate change was necessary.

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<sup>1</sup> This paper later attained a symbolic standing that greatly exceeded its scientific importance: See J. R. Fleming, *Historical Perspectives on Climate Change* (Oxford UP, 1998), pp. 122ff. Another useful historical survey is Spencer Weart, *The Discovery of Global Warming* (Harvard UP, 2003) and <http://www.aip.org/history/climate/>.

<sup>2</sup> This report was published in 1979. For a timeline see W. Leiss, “The Interface of Science and Policy: The Cases of Ozone Depletion and Climate Change”: [http://www.leiss.ca/images/stories/Articles/ozone\\_and\\_climate.pdf](http://www.leiss.ca/images/stories/Articles/ozone_and_climate.pdf)

Since then there has been a great deal of sound and fury, signifying (almost) nothing – at least in Canada. This is the unassailable conclusion reached in the new book by Jeffrey Simpson, Mark Jaccard, and Nic Rivers, *Hot Air*. They distribute the blame for our inaction evenly – governments, environmentalists, and industry all bear the marks of their lash. They dissect mercilessly the suite of policy options for controlling the rise of GHG emissions that our governments have been fiddling with right down to the present day, displaying them as a colossal waste of time and money. They have not been taken in by the smoke-and-mirrors routine of "Canada's New Government," making it plain that current policy initiatives are merely dressed-up versions of previous Liberal failures. Thus they picture us as a nation that is dead in the water, so far as climate change issues are concerned.

But they are not content with simply pronouncing a plague on all the houses of the interested parties. They have a strategy for getting us as a country back on track. Step 1 is simple: Forget Kyoto. Anyone who claims still to be arguing seriously that Canada can and ought to meet its Kyoto commitments is either dissembling, is under the influence of an illegal substance – or is a bloody idiot (p. 248):

We cannot buy our way out of past failures by quickly throwing billions of dollars at international emissions permits or investing in hasty, ill-conceived projects in developing nations. This makes no sense economically, and it would do nothing to get Canada itself moving in the right policy direction. This approach would create an administrative swamp. And it is not realistic politically.

Reading these passionate words, and feeling somewhat intimidated by this piling-on of trump cards, one could almost forget that they are talking about a solemn commitment,

made by the Government of Canada on behalf of its citizens when it signed and ratified a major international treaty. I repeat: Almost.

Once this preamble is out of the way, they move on to Step 2, which is admittedly not quite as simple. Here they tell us what we must do in order to get serious about an "action plan" for climate change. This part of their book too is superbly done; the requisite policy mechanisms, especially the GHG or carbon tax, are clearly explained, as is their rationale. Then these mechanisms are run through the simulation engine designed by Jaccard and his colleagues and the results are shown in two graphs (p. 225), representing an "aggressive" and a "less aggressive" scenario. In both, Canadian emissions would finally peak in about 2015 and then start to decline; by 2050 they would be either at 50% of 2005 levels (aggressive) or at 75% (less aggressive).<sup>3</sup> These reductions are plotted against a business-as-usual case, where no policies to control GHG emissions are in place, in which Canada's emissions are projected to increase by more than 50% over the current level.

At this point reality intrudes. The authors maintain a straight face when talking about government policy targets set 42 years into the future, which may be the ultimate *reductio ad absurdum* of the NIMTOF rule: Not only not in my term of office, but well beyond the "best-before" date of any currently active Canadian politician. And that's not the worst of the matter. Not only is there now no Canadian political consensus that would support this new suite of policy mechanisms, there is still, to this day, no apparent

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<sup>3</sup> It will be some time before we know for sure what are the correct ultimate targets. See A. J. Weaver et al., "Long term implications of 2050 emission reduction targets," *Geophysical Research Letters*, vol. 34 (2007), L19703.

willingness on the part of many of the major institutional powers in Canada – governments and large industry – to even admit such proposals into polite conversation. The authors, who are very hard on what they regard as the illusions, delusions and destructive fantasies of others, environmentalists in particular, even allow themselves to believe that they can convince Albertans to agree that the medicines they prescribe will be good for them. Who's dreaming now?

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One awkward question lies hidden and festering in the text of this book. It is this: "By the way, just why should Canadians even pretend to resolve to make this huge effort to reduce our GHG emissions, over the course of the next forty-plus years, in the absence of any international agreement committing others to do likewise?" The authors of *Hot Air* want to clear the decks quickly of the remaining detritus of policy failures to date so that we can get started down the correct path. And thus as we good-spirited Canadians resolutely beaver away at our new-found resolve, we can look forward to watching the United States, Australia, China, India and other countries add five, ten, twenty or more units of GHG emissions to our common atmosphere for every one that we hold back. Is this a clear-sighted vision that can be substituted for the delusions of environmentalists? No. This is a nightmare.

The Kyoto Protocol is the elephant in the room. The elegant scenarios crafted in this book are designed to distract us from noticing that the animal is still there – to convince Canadians, once and for all, that no good could possibly come from calling attention to the

elephant's presence. They may well succeed, but they may also eventually regret having done so. Their presentation of Canadian industry's intransigence over Kyoto implementation pulls no punches. This is the same sector which from the beginning has drawn a line in the sand over the very idea of a carbon tax. Having won round one, is it reasonable to suppose that these same people will suddenly undergo a miraculous conversion by being exposed to the engaging rhetoric in this book?

In their rush to clear the decks for a new policy agenda on climate change, the otherwise civilized and worldly authors of *Hot Air* assume an attitude of blithe indifference toward the obligations that Canada assumed in ratifying an important international treaty. That our country's performance in the Kyoto treaty negotiations can be fairly described as both a pitiful and a pitiable spectacle is not in dispute. This miserable failure is attributable to one actor, and one actor only: Prime Minister Chrétien. Both his arrogant betrayal of the federal-provincial agreement he himself had engineered in Regina, and his obsession with what the U. S. was doing, left no rational basis for a sensible strategy rooted in the national interest. Meanwhile, of course, Australia, which had prepared itself meticulously for the Kyoto bargaining, walked away with a sweet deal (and then promptly betrayed the process – but that's another story). There can be little doubt that if we had engaged in the same type of tough negotiating, we could have left Japan with something like the Regina target (0/1990 rather than -6/1990) in hand.

But we didn't. We signed on to -6/1990 in 1997, and then in 2002 we ratified, and in so doing our little share of global emissions brought the treaty into force as a result of its 55/55 formula. No one outside Canada held a gun to our heads and compelled us to do this.

What we had agreed to do was stupid, but we did it, and now we have to face the consequences. I take the position that as a matter of national honour Canada must uphold the terms of the international treaties which it ratifies. Therefore we should comply with our Kyoto commitments. Or we should have the moral courage to repudiate the treaty, publicly and formally. But just slinking away and hoping that nobody notices is dishonourable and pathetic.<sup>4</sup>

I know: Complying with our Kyoto commitments is illogical and makes no sense on economic, administrative, or political grounds. I know this because the authors of *Hot Air* tell me so – although one should note that they merely assert the case and do not bother to present any decent arguments to support it. But let me accept what they say in its entirety. It doesn't matter – we should still comply, because we pledged our word that we would comply. That it is inconvenient for us to do so is unfortunate, but irrelevant. Maybe we can derive some useful lessons (to be explained later) from this experience; after all, one usually learns to avoid repeating one's mistakes by experiencing some pain in paying for them. And, as I will argue below, there are some significant benefits that may accrue to us if we follow this alternative path.

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<sup>4</sup> The short article by Gwyn Prins and Steve Rayner, "Time to ditch Kyoto," published in *Nature* on October 25, was noticed in newspapers around the world. It urges us to abandon both an international agreement with emissions caps, as well as a global trade in emissions credits, in favour of a faith-in-technology approach. (The authors appear to have joined the church founded by Australia's John Howard, with its credo of "aspirational" goals, through which one earns heavenly credits just by wanting to be good, rather than actually being good.) Prins and Rayner say that the R & D effort to find cleaner energy technologies should be put on a "wartime footing"; for example, the U. S. alone should be spending \$80 billion annually. Just why we should expect the U. S. to do so, in the absence of an international agreement laying out what others will do, is a great mystery.

But first, how should we comply? At this point in time there is only one option available to us (remember, we got ourselves into this predicament and there is no one else to blame): We have to buy hot air. We have to purchase emissions credits on the international market. How much money are we talking about? Page 143: "If the price [of emissions credits] is in the \$20-per-tonne range for 2008-12, buying 250 million tonnes in credits would cost Canada perhaps \$5 billion per year,..." We would have to purchase credits in each of these years, thus five years' worth. That's a lot of money, isn't it? Well, actually, not that much in a trillion-dollar economy. It's about 1 percentage point on the GST.

So my proposal is that the Harper government should re-allocate the planned 1-point GST reduction to buying carbon credits; since these revenues will continue to rise in a growing economy, the increases will take care of the escalating amount of credits we will have to buy annually over this five-year period. Thus Canadian citizens will not even notice the cost, since we're already paying the tax. The federal government is still running large surpluses, so the \$5 billion decrease in net revenues won't put us into a budgetary deficit. And, if a bit more money is needed, we can just scrap some of the climate change programs in the current federal budget (about \$4.5 billion), since we know they are largely a waste of money, and re-allocate the funds to the credits purchase plan. The bottom line is, we can easily afford the cost of the carbon credits needed for Kyoto compliance.

Those responsible for preventing Kyoto implementation, notably the Canadian oil and gas industry, will be quick to condemn this suggestion, as they have in the past. The authors of *Hot Air* will join them in saying that it is a "complete waste of money." Perhaps

it is. However, before we get carried away by a burst of misplaced righteous indignation, let's just remember what such folks are really saying: That although of course we could easily afford the cost, and in fact could do so quite easily in our trillion-dollar economy, if we really wanted to, we refuse to do so *because we don't think it's important to honour our international commitments*. Quite simply, I think this is an appalling position to take. In fact, it's just like the ghost of the carbon tax: We refuse to even discuss the matter or admit we've seen the spectre.

But we must discuss it. Meeting our Kyoto commitments is one (but not the only) necessary step, in my opinion, in setting ourselves on the correct path in terms of a long-term response to the challenge of climate change. And it is just the right time to have such a conversation: The Harper government is on record as saying that Canada will not withdraw from the Kyoto Protocol, and so our negotiators will be going to Bali in December 2007 to join other countries in opening a dialogue on what should happen in the post-2012 period.

So if others can suspend their indignation briefly, I will lay out the reasoning in support of this position. It consists of the following stages:

1. As everyone knows, the Kyoto Protocol was designed as the first baby step in a long series of future steps toward an effective international agreement to put a "hard cap" on global GHG emissions. (Energy intensity targets are irrelevant in this context.)
2. Ultimately, if all countries which are large emitters are not part of a binding international agreement to first constrain the growth in emissions, and then ratchet them down to some point below present-day levels, there is no point to what any individual country may do in this regard.



3. *Canada would enter the next round of international negotiations, set to commence in 2008, with a strong voice based on the moral authority it will have as a result of its act of compliance with its Kyoto target.*
4. This next round will be critical, because global emissions have been rising much faster than predicted – indeed, they probably exceed the worst-case scenarios used in the 2001 IPCC reports. This means that there is much more urgency in getting a binding international agreement in place.
5. In the next round of negotiations, Canada and similarly compliant countries should insist that *all* of the world's large emitters – including Non-Annex-I countries such as China as well as those like the U. S. which refused to ratify – must come to the table *with a plan and timeframes for constraining and reducing their GHG emissions.*
6. These plans and timeframes should be incorporated immediately into a scenario exercise, giving a clear sense of when total global emissions could be expected to peak and then start to decline. This time-frame can then be evaluated in terms of whether or not it appears that catastrophic impacts, plus a potential "runaway" rise in emissions, can be avoided.
7. IF either (a) large emitting countries refuse to table such plans and their commitments to implementing them, or (b) the targets of some large emitters appear to be inadequate in terms of avoiding catastrophic impacts, and they refuse to accelerate them; or (c) for any other reason a global plan with binding commitments cannot be achieved, THEN:
8. Canada should withdraw from such negotiations, should renounce its own national emissions reductions targets, and inform the rest of the world that it will be reallocating its planned expenditures on mitigation measures, in their entirety, to adaptation measures.<sup>5</sup>
9. If, on the other hand, an acceptable and binding international agreement were to be reached, Canada would ratify this agreement. It would then switch its domestic expenditures to the suite of policies advocated by the authors of *Hot Air*.

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<sup>5</sup> The *only* good reason to "ditch" the Kyoto-type strategy is that one becomes convinced that no binding international agreement – one including all large emitters – seems possible. We should remember that the world has not yet even tried to reach such an agreement. Prins and Raynor want to replace the Kyoto "top-down" approach with a "bottom-up" one inspired by some mysterious force called "social learning." But perhaps what they mean is that those nations making the huge R & D investments they recommend, which then run head on into the free-rider problem, would soon learn that they were wasting their time and money. Prins and Raynor say: "Rather than the top-down universalism embodied in Kyoto, countries would choose policies that suit their particular circumstances." Indeed. And just how long would U. S. taxpayers cough up \$80 billion per year while watching China merrily do its own thing?

If – and only if – Canada were to adopt something like this strategy, there would actually be some point in our undertaking the tremendous long-term effort that will be required to meet the ostensible 2050 target for our emissions.

In the context of their two emissions reductions graphs (aggressive and less aggressive), the authors of *Hot Air* concede that advance notification of the necessary policy measures, especially the carbon tax, should be given in order for the marketplace to begin the process of adjustment. This fits well with the alternative strategy sketched out above. During the period when we are buying hot air we can work out the long-term implementation strategy for the carbon tax and other measures, including negotiating with the provinces and passing any necessary legislation or regulations. We all know how long this process takes, so we should be all ready to go, in 2011 or 2012, when (and if) a binding international agreement has been reached. If no such agreement is concluded until sometime later, these preliminary domestic authorizations can be just left on the table until the time is right. Since the authors of *Hot Air* would have to concede that such preparations will be necessary in any case, the delay I am proposing is no different from what would happen under their preferred course.

We could proceed immediately under the terms of my alternative proposal. The *Hot Air* strategy, on the other hand, is fraught with multiple uncertainties. It is odd, to say the least, that Simpson et al. insist repeatedly that buying hot air is a "political impossibility" (p. 185), when the only known political impossibility in Canada is a national carbon tax. At present there is very little reason to believe that either the Canadian public or its politicians

would accept a national carbon tax, since the idea has never even been seriously discussed.<sup>6</sup> But even more serious is the uncertainties created by those, including the authors of this book, who assume that there will be no consequences resulting from our helping to trash an international agreement that is already in force.

The decisions by important Annex I signatories to either decline to ratify the Kyoto Protocol (United States, Australia), or having ratified to walk away from it (us), is *exactly* what countries such as China and India have been counting on. They can now continue to regard the notion of their having to agree to emissions targets at some future time as a "political impossibility." Or, if others start to put pressure on them, as Western countries did at the "G8+5" Summit in Germany in June 2007, they can get nastier and raise the stakes. After this event officials from both China and India mused aloud about the appropriateness of changing the underlying basis for allocating global responsibilities for controlling GHG emissions: Rather than national targets, they suggested, there should be uniform per capita targets around the world, as a matter of fairness.<sup>7</sup> Should this perspective take hold, the troubles we now envisage in controlling global emissions will pale into insignificance.

Rapidly-developing countries like China and India have always maintained that the Western world must act first, and that they will follow at some point. The logic in this

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<sup>6</sup> There is movement in some provinces (Quebec, British Columbia). Yet so long as a carbon tax remains a political impossibility for Alberta and the federal government, the other developments are simply a sideshow. Alberta's new royalty regime has just made it even more unlikely that the oil and gas industry will tolerate a carbon tax anytime soon.

<sup>7</sup> See my web-essay, "Kyoto is Dead. Long live Kyoto!" (September 2007): [http://www.leiss.ca/index.php?option=com\\_content&task=view&id=99&Itemid=48](http://www.leiss.ca/index.php?option=com_content&task=view&id=99&Itemid=48)

position is unassailable, since it reflects the actual lag-time inherent in the rise of atmospheric concentrations of greenhouse gases. Therefore, even if a new, binding international agreement were to be reached by 2012, and ratified by, say, 2015, it would still have two categories of signatories, one for those whose emissions reductions timeframes begin immediately (the West) and the other for those whose commitments kick in sometime later (the rest).<sup>8</sup> *But in return for re-confirming this sequential phase-in we could also demand a quid pro quo: The baseline year for the West could be reset to the level of actual emissions at 2005, for example, and to some later date for the rest.* (Among other things, it would be good to get past the inherent unfairness in the choice of 1990 as the baseline year.) But it would be very important for the West to insist on getting a commitment to a specific, future emissions peak date from the latter group. Given the actual rise in emissions since Kyoto was signed, this is absolutely essential if any country is to bind itself honestly to the implementation of an effective national emissions reduction strategy.

So the fundamental reason why we should comply with our commitments under the Kyoto Protocol is that honest national action only makes sense in the context of an international agreement. That Kyoto is flawed is no secret; but no good case has ever been made to say that it is fatally flawed – for the simple reason that there is no alternative on the table. The great benefit we would derive from living up to our word is that we would enter the next round of global negotiations with a strong hand (presumably we will also be better prepared). It will require a certain amount of legitimate moral authority to fling down the gauntlet and remind all other parties that it's time to fish or cut bait.

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<sup>8</sup> I am assuming the Kyoto slate would be wiped clean, which would be the wisest course of action.

On the other hand, since without a doubt the current trend in rapidly-rising global emissions will continue, if no new agreement binding all large emitters can be reached, there is really no point in our spending the next 35-40 years, to 2050, in ratcheting down our own emissions. As a commentator who went on record as advocating our ratification of the Kyoto Protocol in early 2002 (a precarious position for someone working in Calgary at the time), I am also one who recognizes that the global situation has changed dramatically since 1997.<sup>9</sup> The precipitous rise in global emissions is now an inescapable fact; the earlier emissions scenarios turned out to be too conservative, for many reasons.<sup>10</sup> This is why a determined effort must be made, starting right now, to bring the Non-Annex-I countries under the umbrella of a new international agreement. This will be a long and bitter road to travel, but the journey cannot be postponed, because with every passing year the chance of actually seeing global emissions peak as a result of an agreement reached by the world's nations – as opposed to a collapse of industrial civilization – falls at an accelerating rate.

Finally, there may be an ancillary benefit to be derived from being good children and taking our Kyoto medicine. For the bitter taste of laying out \$25 billion or more for hot air might concentrate our minds, causing us to reflect on the residual idiocies in our

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<sup>9</sup> In a series of articles published in *The Calgary Herald* beginning in April 2002: See the section, "Climate Change as a Risk Issue," on my website:

[http://www.leiss.ca/index.php?option=com\\_content&task=blogcategory&id=18&Itemid=44](http://www.leiss.ca/index.php?option=com_content&task=blogcategory&id=18&Itemid=44)

<sup>10</sup> For example, a new scientific study argues that global emissions are increasing faster than the rate of economic growth and are now 35% above 1990 levels. Moreover, a positive feedback loop appears to be diminishing the capacity of both ocean and soil sinks to absorb carbon. See M. Mittelstaedt, "A clog in the world's carbon dioxide 'sinks'," *The Globe and Mail*, 23 October 2007, p. A14, reporting on a study just published in the *Proceedings of the National Academy of Sciences* (PNAS Early Edition, 25 October 2007: J. G. Canadell et al., "Contributions to accelerating atmospheric CO<sub>2</sub> growth from economic activity, carbon intensity, and efficiency of natural sinks").

political decision making. Here we are, a modern, literate, well-educated, and technologically-enhanced electorate, and yet we continue to put up with being politically empowered only for those short periods of time while election campaigns are being conducted. For the rest of our lives we seem perfectly willing to consign our faculty of judgment into the hands of whichever budding dictator happened to be first past the post. So one fine day M. Chrétien, without consulting either his cabinet or his caucus, much less the Parliament of the day, or any of his docile subjects, decides on a whim to ignore a deal made with his peers and choose a Kyoto target that was impossible to meet. And now, ten years later, we have to start coughing up our own money to pay for his foolishness and arrogance. I think we should pay up, because we gave our word to the world that we would. And maybe the considerable pain and embarrassment we experience as a result will coalesce into a resolve to change the way we govern ourselves.

## **Section II: Response to Bill Leiss**

**By Mark Jaccard**

**October 27, 2007**

In reviewing our book (Hot Air by Simpson, Jaccard and Rivers) Bill Leiss implies that we are dreaming ("who's dreaming now?") when we outline our recommended mix of GHG prices and regulations for Canada. Then he goes on to explain why Canadian politicians should opt for massive payments to Russia and other countries in order to comply with the Kyoto Protocol. I think Bill is dreaming more than we are.

In terms of domestic policies, the world has changed. First, it is getting more difficult for our governments to ignore 20 years of failed policies (the media and others are mostly on to them). Second, public concern is high and seems to be associated with an understanding that effective policies will affect the price of the fuels we use. Third, several countries now have a track record of GHG taxes and emission caps that reduced emissions and led to the development of new technologies but did not lead to economic devastation (Norway is frequently mentioned). Fourth, the US is finally moving, in part at the state level (especially California), but even increasingly at the federal level according to Congress watchers. Fifth, even Canada's CEOs are publicly pushing for policies that affect prices. Sixth, Quebec (weak carbon tax), Alberta (\$15 /tonne fee for industry) and perhaps soon BC are venturing forth with timid policies that set the stage for policies that raise GHG emission costs.

To me, this is pretty strong evidence that the time is right for a push for effective GHG policy. Of course, Canada still might fail to act. But I am surprised that Bill would suggest we are simply dreaming to propose such policies today.

Bill seems to suggest that our policy proposals are somehow replacements for Canada's Kyoto commitment. I believe we should not conflate the two issues (1) effective domestic abatement policy, and (2) compliance with Kyoto. But perhaps this is our fault. The position of our book is: "If you are serious about GHG emission reduction, here are the policies you must have." I think it would have been less irritating for Bill if we had said nothing about Kyoto, and maybe that should have been our strategy. If it wants to, our

government can implement our policies and at the same time fulfill Canada's Kyoto obligation – mostly through overseas payments as Bill acknowledges.

But, yes, we did in the book make a comment on Kyoto, for better or worse. We noted that Canada will not achieve Kyoto domestically and therefore must contemplate the overseas payment option. I don't think that a politician can make such payments and survive politically, unlike the political prospects for a careful implementation of GHG taxes and/or emission caps as we propose. Bill thinks the opposite. Or maybe not? In reading the latter part of his paper, I get the feeling that he cares less about policy success than about making sure that Canadians pay for their political sins, or the sins of their politicians, or both. His tone sounds a bit too paternalistic for me: "we have to start coughing up our own money to pay for his [Chretien's] foolishness and arrogance" ... "there may be an ancillary benefit to be derived from being good children and taking our Kyoto medicine. For the bitter taste of laying out \$25 billion or more for hot air might concentrate our minds ..."

There is something troubling in this discussion because Bill neatly overlooks the fact that the Kyoto Protocol apparently has a very big loophole. I am not an expert in international law, but the experts I have heard speak on this have noted that failure to comply means that a country must exceed its future target by a certain percentage in the next commitment period. But this future target is of course the subject of negotiation and a country can decide to hold out until it gets the target it wants. So Canada could remain in Kyoto, not pay Bill's guilt money, and then refuse to sign the next phase of the protocol unless its new commitment lets it off the hook for its poor negotiation and poor performance in the first period. Faced with these alternatives – admitting today that we failed to comply with Kyoto



William Leiss, "Dead in the Water," with a reply by Mark Jaccard

and getting on with being a policy model for the world (our proposal) or stuttering along for now and then sabotaging future negotiations – which would Bill prefer?

Finally, our book is not about this issue, but I wonder if a continuation of Kyoto-type national commitments is likely to be the outcome of future international negotiations on GHG emissions. My own guess is that we are heading toward a world in which the rich countries use trade pressure to get poor countries to comply. For example, at least one of the bills before the US congress has language that says something like, "if other countries do not, within 10 years, have in place comparable GHG abatement policies to the cap and trade program of the US, then imports from those countries must be accompanied by the purchase of emission permits (allowances) in the US to reflect the emissions associated with their production." If I were a betting man ...

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**Note from William Leiss: See the third article in my series, "All Bets are Off"  
(31 October 2007)**