

Critical politics of carbon sinks

Last week's suspension of climate-change negotiations in The Hague highlights a political need to grapple with the uncertain science of carbon sequestration before talks resume next year.

So near and yet so far. Seldom can the phrase have been more aptly used than for the failure of a last-minute compromise at last week's round of intergovernmental negotiations on limiting the impact of global warming (see page 503).

What did emerge clearly from the meeting was that the scientific complexities that surrounded the key question addressed at the previous meeting in Kyoto three years ago — whether it is necessary to take steps to limit carbon emissions — pale dramatically compared with the task of negotiating an agreement on the mechanisms needed to put such limits into effect. And, even more so, on the monitoring, evaluation and verification procedures required to ensure that these mechanisms operate effectively and in harmony with other social and economic objectives.

Given such complexities, which some describe as even more labyrinthine than global trade negotiations, it is hardly surprising that the negotiations did not achieve more. Indeed, conference officials' explanation that delegates had "run out of time" has more than the usual ring of truth to it. And the formal description of the meeting as having been "suspended" — hopefully to be continued next spring, probably in Germany — seems a more accurate description than suggestions that the negotiations have broken down irrevocably.

There is one thing that this 'time out' will allow which is essential for progress: a fuller appreciation by all parties, in the context of possible deals to resolve the current impasse, of what we already understand about the role of the terrestrial biosphere in the carbon cycle, and the dynamics of this role as both a source and a sink of atmospheric carbon. There is growing scientific evidence that the contribution of forestry and farming practices to the global carbon budget is of sufficient magnitude to offset some of the carbon released by burning fossil fuels. Such evidence has been eagerly seized on by those countries — particularly the United States — that see in the manipulation of carbon sinks a more attractive way of achieving the overall carbon-emission reductions agreed at Kyoto than cutting down on fossil-fuel use.

Farm factors

It could, for example, lead to the US farming community receiving substantial subsidies to change its land-management practices, such as reducing the depth of ploughing to decrease the release of carbon into the atmosphere. And, given the influence of the 'farm vote', this itself could boost the prospects of an eventual agreement being ratified in the Senate. Indeed, a report earlier this year from the Pew Center on Global Climate Change, *Land Use & Global Climate Change*, points out that, under appropriate conditions, "The Kyoto Protocol can provide incentives for improved management of the terrestrial biosphere" (see: http://www.pewclimate.org/projects/land_use.cfm).

But there is a problem here, namely the many scientific uncertainties that still surround our understanding of the terrestrial carbon cycle. Issues in need of close attention range from suggestions that global warming can itself impair the ability of land and the oceans

to act as carbon sinks, to a lack of detailed knowledge about the long-term effects of short-term measures (such as altering ploughing depths). Indeed, such uncertainties have frequently been used to attack the whole concept of including carbon sinks in post-Kyoto calculations.

This has placed environmentalists in the unusual situation of demanding 'sound science' before action is taken, a demand previously voiced by their opponents, those sceptical of claims of a human impact on global warming itself. In both cases, the demand has had a political motive. But in both cases, too, it reflects the political reality that agreement on action, particularly when substantial costs are attached, is likely to be easier to achieve if it can at least be based on some degree of scientific consensus.

Panel's purpose

Achieving that is a task for a body that was not much in public evidence in the final showdown in The Hague, but which continues to play a key role behind the scenes — the Intergovernmental Panel on Climate Change (IPCC). It was the conclusions of IPCC working groups about the severity of the impending climate change that prompted agreement on the need for action in Kyoto. Since then, further research has strengthened those conclusions. But other working groups have been focusing equally hard on possible mitigation strategies — including the opportunities opened up by what is known as "Land Use, Land-Use Change and Forestry" — or LULUCF (see <http://www.ipcc.ch/pub/srlulucf-e.pdf>).

If last week's meeting had ended in agreement, the next step would have been a request to the IPCC from the ministers present to take on greater responsibility for reporting on such possibilities. The conference's Subsidiary Body for Scientific and Technological Advice had already prepared a proposal that the IPCC should be asked to develop methods for measuring the role of LULUCF activities in the carbon balance, to "prepare a report on good practice guidance and uncertainty management" related to such activities, and even "to examine the feasibility of developing and the implications of applying biome-specific forest definitions".

Even without official blessing such studies are still needed — perhaps more than ever. No one believes that they will by themselves resolve the current impasse — to believe that would be to ignore the wide ideological chasm that separates those in the US negotiating camp, keen to preserve what they can of a market-based approach to climate problems, from their more hard-line European critics demanding tough government intervention. And it remains true that strategies based on managing carbon sinks may be only a short-term measure. In the long run, the only solution is a substantial reduction in overall greenhouse-gas emissions, and clearly one cannot wait for scientific certainty before taking significant steps in that direction. But for now, a key task in the lead up to the continuation of the negotiations next year is to exploit land-use strategies, scientific uncertainties and all, as a means of addressing the political constraints on the United States' ability to mitigate man's impact on climate change. ■