

"Smaller investments reduce the pressure on companies and allow them to become more flexible in their business strategies." John Browning, page 459

Time running out to deal with banks of greenhouse gases

SIR — In your Special Report 'Cutting out the chemicals', you discuss the possible shift of regulatory control of hydrofluorocarbons (HFCs) from the UN Framework Convention on Climate Change to the Montreal Protocol (*Nature* **457**, 518–519; 2009). Since then, amendments to the protocol have been proposed that would establish HFC phase-down schedules, in parallel with similar provisions in US climate legislation — as mentioned in your News story 'Climate burden of refrigerants rockets' (*Nature* **459**, 1040–1041; 2009). However, although a bridge may be under construction to address the problem of HFCs, there is another gap that requires action.

Neither treaty controls emissions of the remaining chlorofluorocarbons and other ozone-depleting substances that HFCs were designed to replace. Besides the damage they cause to stratospheric ozone, these are also greenhouse gases that are up to 11,000 times more potent than carbon dioxide. Large quantities of chlorofluorocarbons produced before the phase-out deadlines remain in use in older appliances and buildings. These 'banks' are capable of releasing into the atmosphere the equivalent of 18 gigatonnes of carbon dioxide (see the International Panel on Climate Change and the Technology and Economic Assessment Panel's *Safeguarding the Ozone Layer and the Global Climate System*, 2005, at <http://tinyurl.com/ndtd9z>), about one-third of which will be emitted by 2015 unless recovered and destroyed under proper incentives.

Policy-makers have an immediate opportunity to prevent hundreds of millions of tonnes of greenhouse-gas emissions every year. Possible strategies could include: counting banked ozone-depleting substances as

controlled greenhouse gases; allowing greenhouse-gas offsets for certified destruction of banked ozone-depleting substances; setting rigorous standards and protocols to quantify and verify projects for destruction of ozone-depleting substances; and establishing incentives for replacement technologies that avoid substitution of ozone-depleting substances with other greenhouse gases.

Recognizing these banks as greenhouse gases in domestic legislation and international agreements would spur carbon markets to finance cost-effective collection, as well as transport and destruction of unwanted ozone-depleting substances. In the interim, regional and state cap-and-trade schemes could take comparable steps to mobilize projects, permanently removing a major threat to ozone and climate, and accelerate the transition to advanced technologies. There is only a narrow window to address this opportunity, but the timing is right for action.

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Petitioning for a revised statement on climate change

SIR — We write in response to your issue discussing "the coming climate crunch", including the Editorial 'Time to act' (*Nature* **459**, 1077–1078; 2009). We feel it is alarmist.

We are among more than 50 current and former members of the American Physical Society (APS) who have signed an open letter to the APS Council this month, calling for a reconsideration of its November 2007 policy statement on climate change (see open letter at <http://tinyurl.com/lg266u>; APS statement at <http://tinyurl.com/56zqxr>). The letter proposes an alternative statement, which the signatories believe to be a

more accurate representation of the current scientific evidence. It requests that an objective scientific process be established, devoid of political or financial agendas, to help prevent subversion of the scientific process and the intolerance towards scientific disagreement that pervades the climate issue.

On 1 May 2009, the APS Council decided to review its current statement via a high-level subcommittee of respected senior scientists. We applaud this decision. It is the first such reappraisal by a major scientific professional society that we are aware of, and we hope it will lead to meaningful change that reflects a more balanced view of climate-change issues.

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Indigenous people defend rainforest as well as their rights

SIR — What can we learn about the relationship between native peoples and environmentalism in the Amazon from last month's tragic clashes between indigenous protesters and government security forces in Bagua, Peru? The event, in which more than 30 people were killed, underscores the overlooked and sometimes hazardous role of indigenous groups and organizations in confronting powerful commercial interests in the Amazon.

The assumption that heavily forested, indigenous-occupied lands are unproductive has fuelled colonization, deforestation and tribal displacement in Amazonian Peru for a century. Following enactment of the United States–Peru Trade Promotion Agreement in February this year, Peruvian

president Alan García issued a series of decrees aimed at opening native communities to oil, mining, logging and other economic ventures. Indigenous Awajun and Wampis protesters, calling for the repeal of these decrees, set up a roadblock in April that was violently dispersed on 5 June by security forces. After two weeks of intense international media attention, the government repealed a few of the decrees.

The incident, which has been called the 'Bagua massacre', provides a sobering lesson for the conservation community. The 'ecologically noble savage' debate has revolved around whether demographically growing and politically engaged indigenous populations represent a threat to biodiversity conservation or an opportunity for it. Defenders of native rights to vast tracts of Amazonia say that indigenous reserves deter deforestation, whereas some conservationists say that their exploitation of natural resources has adverse effects (see S. Schwartzman *et al. Conserv. Biol.* **14**, 1351–1357, and J. Terborgh *Conserv. Biol.* **14**, 1358–1361; 2000). But ultimately, the dual goals of nature conservation and indigenous rights have proved compatible. Three-quarters of Latin American national parks include native inhabitants, and Amazonian indigenous reserves maintain forest cover and refuges for many animal species — unlike surrounding colonized areas, which suffer heavy losses to biodiversity and forest cover.

Indigenous people's intimate connection with the Amazon rainforest has led them, countless times, to lay down their lives in defence of their territories and, incidentally or not, the biodiversity and carbon stocks they harbour. Hard-core conservationists should remember these sacrifices when factoring out the 'ecologically noble savage'.

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