

CORRESPONDENCE

Science and Mexico are the losers in institute politics

Events at Mexico's Instituto Potosino de Investigación Científica y Tecnológica (IPICYT) have escalated to crisis point (see page 148). We the undersigned call on the world's academic community to help reverse the damage currently being done in this research institution, once a shining example for all developing nations.

After battling for two years, Humberto and Mauricio Terrones — acclaimed leaders of IPICYT's prestigious nanoscience and nanotechnology group — have been removed from office. This flies in the face of the presumed commitment of the Consejo Nacional de Ciencia y Tecnología (CONACYT), Mexico's highest research authority, to seek a "solution that will be a product of open negotiations carried out with tolerance, good will, great objectivity and agreements that avoid personal aggression and radicalization of positions". This is the wording of a recommendation solicited by CONACYT from a prestigious group of scientists formed to help prevent this outcome.

An international group of some 75 scientists has been working hard with us for two years to broker a solution to this sorry affair, to no avail. Our hope is that President Felipe Calderón will step in and avert further damage. Otherwise, the prestige of Mexico's science and the prospects for its technological development will suffer, as young Mexican scientists won't return after being trained in research abroad.

The academic community should join forces to reverse this situation.

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Colour-coded targets would help clarify biodiversity priorities

In this International Year of Biodiversity, we should be setting ambitious but realistic targets for biodiversity policy over the next ten years. Those shaped at last month's sixth Trondheim Conference on Biodiversity in Norway will be refined by the Subsidiary Body on Scientific, Technical and Technological Advice in May and at the Conference of the Parties of the Convention on Biological Diversity (CBD) in October.

As participating scientists in the international biodiversity programme DIVERSITAS, we welcome the draft set of 2020 targets proposed by the CBD. But the targets continue to mix the biodiversity we value highly (that is, the conservation agenda) and the biodiversity we urgently need to secure the benefits people derive from fully functioning ecosystems.

To resolve competing demands, these different priorities should be made explicit by categorizing the targets according to their primary motivation. We suggest the use of red targets to stem urgent deleterious biodiversity loss, green targets for conservation priorities and blue targets to secure the long-term benefits from functioning ecosystems.

The CBD should work closely with the science community to develop these targets for changing environments and in the light of new scientific discoveries. The proposed Intergovernmental Platform for Biodiversity and Ecosystem Services (H. Mooney and G. Mace *Science* **325**,

1474; 2009) and the global biodiversity observation system GEO BON (R. J. Scholes *et al. Science* **321**, 1044–1045; 2008) will be valuable tools in this collaboration.

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Barriers to carbon capture and storage may not be obvious

There's more to 'Buried trouble' than whether carbon dioxide should be injected under urban areas or offshore (*Nature* **463**, 871–873; 2010). Some barriers to carbon-sequestration measures are less immediately noticeable than public opinion.

For example, the technology should be incorporated into developing energy systems. In most scenarios produced by the Intergovernmental Panel on Climate Change (IPCC), much larger volumes of CO₂ will be captured in China and India by 2050 than in developed countries. But the scale and pace of energy-systems development, and the necessary carbon capture and storage (CCS) technology transfers, are daunting.

People optimistic about CCS technology transfer to developing countries should remember that transferring even cost-saving technologies (transgenic seeds, for example) has been difficult. We should develop transfer incentives by recognizing CCS investments within the Clean Development Mechanism of the Kyoto Protocol. We must also limit uncertainties surrounding CCS investments in developing countries, particularly in protecting intellectual property in capture technologies.

Another barrier to CCS is that countries with a weak manufacturing capability are not in a strong position to develop lucrative carbon capture technologies. The Australian government, for example, has committed Aus\$2.4 billion (US\$2.2 billion) to its CCS Flagships Programme. But two of the projects rely on capture technologies from Japan (Mitsubishi in the ZeroGen Project) and the United States (GE in the Wandoan Power Project). Governments need to balance their desire to support emerging domestic CCS technologies against importing potentially better technologies from abroad.

CCS solutions are also subject to the vested interests of national politics. In the coal-heavy economies of Canada, the United States and Australia, for example, governments promote CCS in their emissions-reduction promises, but they have been reluctant to mandate the technology.

The real barrier to CCS is that, even in enthusiastic countries, the focus is on selling CCS solutions rather than on mandatory CCS deployment. Advocates should commit to a firm timeline for mandatory CCS on all new and retrofitted large emitters.

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