

Rethink anti-bioterrorism plans

With the US National Academies about to pronounce on science's role in counteracting bioterrorists, it falls on the Congress to oppose and restructure the domestic security framework proposed by the Bush administration.

In the immediate aftermath of the events of 11 September 2001, the US public's reaction to the calamity that had befallen their country was characterized by remarkable calm and determination.

Despite the grief engendered by the terrorist attacks and the great difficulties that appeared before the nation last autumn, most people expressed strong faith that the country and its institutions could steer through the challenges ahead. This belief carried with it considerable, perhaps unreasonable, expectations. One of these — implicit in the first images of precision bombing of the bedraggled foe in Afghanistan — was that the United States' formidable expertise in science and technology would help it to navigate these challenges.

Leading scientists, mindful of their prominent role in the Second World War and the Cold War, were quick to volunteer their services in the new 'war against terrorism'. The National Academies of science and engineering and the Institute of Medicine quickly emerged as forums for the input of advice to the government. President Bush moved quickly to obtain Senate confirmation for John Marburger, a physicist, to serve as his science adviser, and proceeded to fill other senior scientific vacancies in his administration.

But in the nine months since September, the complexity of the challenge that the government has set itself has only become more apparent. By declaring war on terrorism, rather than on al-Qaeda, President Bush, as he himself has grimly acknowledged, has set himself up to be held accountable if and when future terror attacks occur. Public discussion in the United States about the nature of these threats has swirled like a tornado around nuclear attacks, both fissile and 'dirty', chemical attacks and biological attacks, as well as conventional bombings, shootings and hijackings, potentially carried out by US citizens as well as by outsiders.

Limited power

In the next few days, the National Academy will issue its own recommendations of how science and technology can be harnessed to meet this cacophony of threats. It has walked some fine lines in its time, but few have been finer than the one between the need to broadcast science's relevance to the war on terrorism and the admission that science and technology have limited power to protect America.

Last October's still-unsolved anthrax attacks serve as an adequate example of what science can do and what it can't. The public confusion that accompanied the attacks showed how much government agencies need good information, as well as a scientifically competent leadership that can make statements about risk that will carry at least a modicum of public confidence.

However, the anthrax attacks themselves, which seem to have used materials from the US government's own bioweapons-research laboratories, highlighted the risks of responding to a threat by spending more money to give more people access to the knowledge and materials that constitute the threat. And the lack of any real mechanism for containing the attacks once they had occurred exposed the weaknesses of technology-led counterterrorism.

The best that science can do in most of these situations may be to provide the people who will make security decisions with timely and accurate information. This week, for example, researchers will

suggest how the United States should best use its vaccine stockpile to counter just one biological threat, that of a smallpox attack (see page 775). In the longer term, research programmes help government agencies to perform various functions, from intelligence gathering to disease inoculation, that will form part of the war against terrorism. In announcing his proposed new Department of Homeland Security on 6 June, President Bush acknowledged the importance of this role.

The details of the announcement indicate, however, that the authors of the proposal paid scant attention to the practicalities of imbuing the new agency with a sufficiently strong scientific arm. The initial proposal would build this operation mainly by transferring three existing activities — the bioterror-related activities of the National Institutes of Health (NIH), the Department of Agriculture's Animal and Plant Health Inspection Service, and the Lawrence Livermore National Laboratory — into the new department. Alarming, the administration has so far failed to make much of a case for the first two, and the third has apparently been withdrawn (see page 780).

A matter of trust

The largest proposed transfer is that of bioterror-related work from the NIH. Most of this has only recently been undertaken by the NIH — the government had doubled the size of this activity in the year before 11 September and has doubled it again since — making its transfer to the new department relatively straightforward, and even logical. However, the proposed shift raises several objections that transcend the predictable outcry that accompanies any proposal to restructure parts of the government.

The first is that the move would isolate bioterror research from existing, health-orientated research programmes at the NIH that currently house most of the relevant expertise, in everything from molecular biology to epidemiology. The second is that it would distance the research from the Public Health Service, the sister agency of the NIH whose role is regarded by most experts as central to bioterrorism containment. The third objection is that the NIH is widely trusted by the Congress and the public to spend the new money wisely — more trusted, on the basis of past experience, than a branch of a new agency such as the proposed Department of Homeland Security.

Faced with these objections, administration officials have started to backtrack from the transfer, suggesting, for example, that the NIH might continue to administer the granting of the new money under contract to the new department. But such arrangements do not work well in the US government, for a variety of reasons. The fact that the administration is resorting to them merely confirms that the research structure at the proposed new department was given little thought before the proposal was published. This impression has been confirmed by the hasty withdrawal of the massive Lawrence Livermore laboratory from the proposal.

It is disconcerting, if unsurprising, that Marburger and other senior scientific officials seem to have had no early contact with the White House cabal that put together the framework for the new department. Congress now has the opportunity to rectify the situation and construct a plan whose research component will be more deserving of the public's trust. ■