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ASKING THE IMPOSSIBLE

The urge to build climate-resilient nations naturally brings with it a desire for more detailed knowledge of the changes that lie ahead. Where local and regional stakeholders have very specific information requests, on which multi-million-pound decisions rest, climate scientists can find themselves in a decidedly uncomfortable position. This is especially true of government climatologists whose role is the provision of a bespoke service to society.

But where conflict exists between user requirements for information and the ability of the science to meet those demands, clearly the latter must take priority. The British government seemed to have lost sight of this the week before last, when the Department of the Environment, Food and Rural Affairs (DEFRA) released the long-awaited projections of UK climate impacts (*Nature News*, doi:10.1038/news.2009.586).

The projections, produced in conjunction with Met Office scientists and those from the UK Climate Impacts Programme, undeniably represent a new frontier in climate science, offering information on likely impacts up until 2080 at the scale of 25 square kilometres, with weather sequences resolved down to 5 square kilometres. It could be, as claimed by DEFRA's chief scientist Bob Watson, that the new method used to produce them will soon be embraced by other nations and by the global climate community.

But the concern of an independent review committee — that the results “stretch the ability of current climate science” — is legitimate and troubling (see <http://tinyurl.com/netntg>). University of Oxford climatologist Myles Allen, who was on the committee, is just one of a number of noteworthy scientists worried that projections at such fine spatial scales, particularly over long time periods, are of unknown reliability.

If the science is stretched — and proves to be unreliable — then it could lead to the squandering of precious resources for climate planning. Worse still, it could lead to a loss of public trust in even the most robust aspects of climate science.

Before millions are invested on the back of the UK regional climate projections, DEFRA would be wise to take on board the recommendations of the independent review: namely, the scientists involved should now aim to relieve concern over the validity of the methods used, by submitting them to a top-tier journal for formal peer review. Moreover, DEFRA would do well to incorporate independent experts in the early stages of all future assessments, as advised by the review.

Having a reliable climate forecast would considerably reduce the scale of the challenges ahead. But certainty is not a necessity for preparedness, as is evident from the ‘no regrets’ adaptation approaches of local communities in Africa (page 84). Nor is it a promise that even the best of scientific endeavours can uphold.

OLIVE HEFFERNAN, EDITOR

Published online: 1 July 2009
doi:10.1038/climate.2009.64

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