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SALUTING SCRUTINY

Recent controversies in climate science — namely the emails purloined from the University of East Anglia in Norwich, UK (see page 26), and the erroneous statements on the fate of Himalayan glaciers (see page 28) — raise several issues about professional conduct, some more genuinely concerning than others.

One that goes straight to the heart of sound scientific practice is the issue of data transparency. Sharing data is not only crucial for the progress of science: in areas of controversial research, such as climate change, it's one of the cornerstones of public trust in science.

Yet in many fields of research, scientists are still reluctant to make their data widely available (*Nature* **461,** 160–163; 2009). A reluctance to share data with the wider public (*Nature* **460,** 787; 2009) was, after all, the starting point of allegations of professional misconduct against Phil Jones, the scientist at the centre of the 'climategate' e-mail controversy.

As early as 2002, Steve McIntyre, editor of the *Climate Audit* blog, began to send requests to Jones for access to a data set held jointly by the Climatic Research Unit (CRU) at the University of East Anglia, where Jones was director, and the UK Met Office's Hadley Centre in Exeter. The data set, known as HadCRUT, is the longest existing instrumental temperature record, extending back to 1850, and is exactly the sort of data set that McIntyre has become known for scrutinizing.

Jones's refusal and, in some cases, his inability to provide these data under the Freedom of Information Act are now the subject of an independent investigation. Far more important than the behaviour of one individual, however, is the culture within a community. The scrutiny of sceptics has made many climatologists wary of sharing data and ill at ease discussing gaps in the science (*Nature* **463,** 284–287; 2010).

But if the recent scandals have a silver lining, it's that this culture is changing. Already the UK Met office has published the code, audit trail and data from more than 3,000 of the 5,000 global meteorological stations on its website. Last week it went further, calling for an international effort to create a new global temperature record based on quality-controlled data and methods that are open to public scrutiny. The proposal, which has been endorsed by the World Meteorological Organization (WMO) on the condition it is funded, will address some of the concerns about bias within existing temperature data sets as well as providing data at finer timescales, which is of greater value to decision-makers.

Governments should now rise to the challenge of financing this endeavour over the next three years. Such efforts to make data available could go still further. Urgently, the WMO must insist that all nations release their historical temperature records, regardless of conflicting commercial interests. In the longer term, the climate science community must look to consolidate and strengthen efforts to collect, quality-control and release observational temperature data. Only with this level of openness to independent verification can queries over data quality be finally put to rest.

OLIVE HEFFERNAN, EDITOR

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