

Editorial

Global change for ever!

How is your global change credibility? Does your research fit nicely into unravelling what has happened over the last few thousand years, what is happening now, what *might* happen in the next few years. If so, well done! Your research is probably well reviewed and well funded.

Humans are no different to any other animals in being particularly concerned about what is going to happen to themselves collectively and as individuals. It is laudable that there are those who are prepared to address that problem, and even more laudable that there are others prepared to pay them to do it. I just hope those engaged in “change” research, at the end of the day, predict accurately what is going to happen, and even more that there will be politicians and leaders with enough courage to act on the advice when it comes.

However, we should not let things get out of proportion or lose sight of reality. Our world has been changing since the day it was born, some four and a half thousand million years ago. Furthermore, it has just been announced that Cambridge scientists have imaged traces of the Big Bang radiation, showing what the universe must have looked like “soon” after its creation fifteen billion years ago. Global change, and before that “galactic change”, has been going on for rather a long time. How then did scientists ever allow two simple words, “global change”, to become hijacked and constrained within such a limited timeframe?

Geological research tells us that over time, world sea-levels have certainly been higher, global temperatures may well have been more uniform and warmer at the poles than today, large trees grew within ten degrees of the poles, dinosaurs evolved, conquered and became extinct, ice caps have been much much larger and continents have moved from one hemisphere to the other, collided, amalgamated and broken up again. All this is pretty dramatic stuff and, although none of us, nor perhaps any member of the human race over however many years it might continue to exist, will live to see changes of such magnitude, we should not forget that today’s global change programmes cannot but address mere perturbations in the great game plan of the world.

Continents may take more than a few million years to move very far, but that rate is now measurable using very precise, satellite-based surveying techniques. Not all geological phenomena take so long to happen. Dust clouds generated by the last eruption of Mount Pinatubo, for example, had an almost immediate effect on global temperatures. It is likely that the temperatures will settle back again, but what might be the effect if several Mount Pinatubos erupted at once, or kept doing so on a regular basis? Volcanic eruptions are still a long way from being predictable with any precision, but they can have dramatic effects on the climatic predictions of very expensive banks of computers. Their origins relate to those excruciatingly slow movements and events in the Earth’s crust, and for evidence of the effects of really large-scale volcanic activity we need to look at the geological record.

Accordingly we need to put the present global change programmes into context by making it respectable once again to take the longer view, and to study geology and palaeontology because they are interesting. Governments, research councils and funding bodies should have the courage to provide for an “Our Earth” programme. The research may not always have a predictable, (and preferably commercial) outcome, but you can be sure most of it will eventually come in handy. Who knows, some of it may even feed back into global change programmes?

Remember, “global change” is not just for 100 000 years, it’s for hundreds and thousands of millions of years – and don’t let anyone tell you otherwise.

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