

THE WEATHER MAKERS

How man is changing the climate and what it means for life on earth

by Tim Flannery

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The paleoclimate record shouts out to us that, far from being self-stabilizing, the Earth's climatic system is an ornery beast which overreacts even to small nudges.

— Wallace Broecker, *Cooling the Tropics*

A lot of Old Guard liberty sorts, believing in the Infinite Sink and wide open spaces forever (or being susceptible to self-serving oil-cartel propaganda), don't even like the word environmentalism. Let's call it conservation then....

Climate change or global warming, take your pick of phrases, the evidence shows that human-generated carbon dioxide, unchecked, will double by the end of the century, with the likelihood of heating our planet 5°F to 10°F. As stated in Ghostbusters, "That would be bad."

Tim Flannery, a world-renowned scientist, explorer, and conservationist, was initially skeptical of the global warming thesis. But through observations of changing ancient landscapes—e.g. warm-plant species moving up mountainsides—and scientific journals discussing severe alpine threats broke the ice (no pun intended) for him.

By 2004 his inquiries had turned to fears. The world's leading science journals were full of reports that glaciers were melting 10 times faster than expected, greenhouse gases were reaching levels not seen for millions of years, and species were vanishing seemingly overnight. Increasing extreme weather events and the recent occurrence of several of the hottest years on record sealed his conviction.

Flannery became an advocate.

Not just any advocate, mind you, one of those exceptional scientific advocates such as Carl Sagan who can write. This book is at once a reference manual you can mark and return to again and again, and an exciting narrative of discovery. He is even clear on matters like alternative energy systems.

Did you know Denmark obtains nearly 25% of its electric power through wind, and the power is owned on a cooperative, distributed basis by the citizens themselves?

Early in his voyage he came across the Keeling Curve, "one of the most wonderful things I've ever seen, for in it you can see the planet breathing." Shown on the right, you see the rise; the concentration for thousands of years before 1900 was approximately 275 parts per million.

The Keeling Curve is often shown in conjunction with what is called the Hockey Stick, a graph produced under auspices of the Intergovernmental Panel on Climate Change (IPCC) in 2001. If you go to the Web you'll find a lot of heated discussion on both curves, but mainly on the Hockey Stick because of the uncertainty (suggested by the gray area) of temperatures which were inferred before 1900.

My point of view is the two figures are consistent if the causal model of carbon dioxide as a "greenhouse gas" holds true. I doubt there is any scientific disagreement that carbon dioxide in the atmosphere works to retain radiated heat on the earth's surface.

Then I'm reasonably confident scientists know how much of the CO₂ is human-generated... and this anthropogenic CO₂, via fossil fuel combustion, is a big enough part of the increased concentration creating most of the warming.

Then if you accept that, as I'm sure most peer-reviewed climate-change scientists do, the nuts are off the buggy!

Flannery provides scenario after scenario, case after case of real effects of increased global temperatures. Still, he's hopeful we will become conscious of the problem and solve it... as indeed we seem to have resolved chlorofluorocarbon (CFC) damage to the ozone layer.

This is a fascinating, humane, objective, scientific look at global warming and what we can do simply as people to avoid cataclysmic carbon-driven climate change in this century. I love this book; it contains so

many insights I could go on all night. Particularly, he helps us see our atmosphere, our "great aerial ocean," as more fragile and thin than the skin of an onion.

Let me leave you with one quote in the What You Can Do department:

"The best evidence indicates that we need to reduce CO2 emissions by 70 percent by 2050. If you own a four-wheel-drive and replace it with a hybrid fuel car, you can achieve a cut of that magnitude in a day rather than half a century...."

Thoughts?