

Book Review: Winds of Change: Climate Weather and the Destruction of Civilizations, By Eugene Linden, Simon and Schuster, 2006

By Patricia G. Goldman
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More than 25 years have gone by since I first saw a big banner across the Museum of Natural History in New York warning that climate change could become evident by the year 2000. We have already seen the hottest years on record increasing since 1980, a swarm of droughts exceeding hundred year records, floods exceeding 500-year records, and the Asian tsunami of 2004. Hurricane Katrina in 2005 literally brought home to us in the United States the fact that weather changes could impact our coastal cities, our economies, our ability to get our property insured, and the ability of our government to respond to emergencies.

Now in his book “Winds of Change: Climate, Weather, and the Destruction of Civilizations”, Eugene Linden warns that climate changes in the years ahead could be very abrupt, and we should act immediately.

What can we do? We can reduce the air pollution that results in greenhouse gases trapping heat close to earth. We can avoid further overbuilding along shores and wetlands, and avoid tearing out the vegetation that holds shores together. We can stop the wasting of water that leads to deforestation and vast forest fires. We can encourage scientists, engineers and public health professionals to plan strategies and develop appropriate products. We can develop economic models of costs and benefits of different steps – and the cost of doing nothing.

Why have we waited so long? Why wasn't there a huge public effort to do all we could humanly do to prevent global warming? The answer, according to Linden and numerous other environmental journalists, is that industries and their lobbyists believed they would lose money if they were forced to change their ways. Instead of using their American ingenuity to discover environmentally friendly ways that could also be profitable (like Toyota's Prius car), they put their effort into fighting environmental regulations, diverting public attention from the real issues, and demeaning scientific studies. Since the release of a major report by the UN Intergovernmental Panel on Climate Change this spring, based on studies by 2500 scientists worldwide, the argument that there is not scientific evidence has collapsed.

In “Winds of Change”, Linden describes some of that science. He interviewed numerous scientists and went on scientific expeditions to the Arctic, Antarctica and the Gulf Stream. He describes, for instance, how ice cores drawn from more than a mile below the Greenland Ice Sheet have layers of different consistencies - some solid, some with gaseous bubbles – that can explain the scale, rapidity and timeframe of climate changes. It is similar to learning about the life and times of a tree from the rings in its trunk. Geologists and geochemists have learned about climate change from

examining colors in deep sea sediment cores taken from areas as diverse as the Irish Sea and sea floors off Mauritania. Out in the Gulf Stream, essentially “a gigantic hot river moving through the Atlantic”, Linden watched scientists measuring water temperatures, and wind speeds and directions to help determine if changes are occurring. He explains that the Gulf Stream that “delivers heat to the far north is partly the result of one of the biggest and longest influences on climate.”

Linden says that we are still in the 10,000 year Holocene period, which “may be a protective bubble of warmth among the ice ages, but ripples of climate change have occasionally intruded to upset the calm.”

Linden explains that climate change has had a big impact on previous civilizations. For instance, he describes scientific and archeological data from the Greenland Ice Sheet Project in 1980 that is used to back the theory that the Norsemen gave up on colonizing what is now America when the Medieval Warm Period abruptly turned into the Little Ice Age 600 years ago.

“Are we better prepared to deal with climate change than our forbears?” Linden asks and answers that our world is much more heavily populated now with bigger demands for sustenance, and that “around the world humanity has reduced nature’s capacity to dampen extremes in countless ways.”

Linden’s book is complex and not a quick read straight through, but it is filled with enlightening facts and a fascinating chronology of the science of climate change.

Patricia Goldman was Executive Director of the Asthma & Allergy Foundation of America/New England Chapter, until she retired in 2004. She was also a contributing editor for the Newton Times.