Climate Change 7 — Apocalypse Coming (But Delayed)?

In the previous white paper we discussed climate changes that the IPCC has documented. If these changes continue, are they capable of causing an apocalypse over time? The quick answer is perhaps: over time they can cause a lot of harm if nothing is done to stop them.

Perhaps the most famous apocalyptic claim is that melting of the Greenland, East Antarctic, and West Antarctic Ice Caps could raise the level of the oceans sufficiently to flood coastal regions. The evidence is not controversial. If they were to melt in their entirety, they would raise the level of the oceans by about 213 ft. That wouldn't just flood Miami, it would flood virtually all of Florida. The evidence shows that Greenland and Antarctica have been ice-free in the past, hundreds of thousands of years ago,[i] so it is possible, BUT…

In the previous white paper, we noted that ocean levels have recently been rising about 1/9 inch per year. Even if they accelerate to 1/5 inch per year, it would take 13,000 years for the seas to rise 213 feet. At what point would coastal cities encounter apocalyptic difficulties? If we say at 10 feet, it would still take 600 years. (There may be some possibility that change can occur more suddenly, which we will discuss in the next white paper.)

Another climate-related apocalypse that has garnered repeated attention is the drying that has occurred in some regions. Perhaps most notorious has been the region of Africa just south of the Sahara Desert (the Sahel). This region has suffered desertification and repeated droughts, leading to repeated humanitarian crises. Fifty years ago Lake Chad, located in this area, was the fourth largest lake in Africa. Twenty million people depended on it for water. Over the decades, Lake Chad has shrunk to 1/5 of its former size, and it continues to shrink.[ii] What will these people do for water? (see Footnote 2 for a map showing the lake's former and current size)

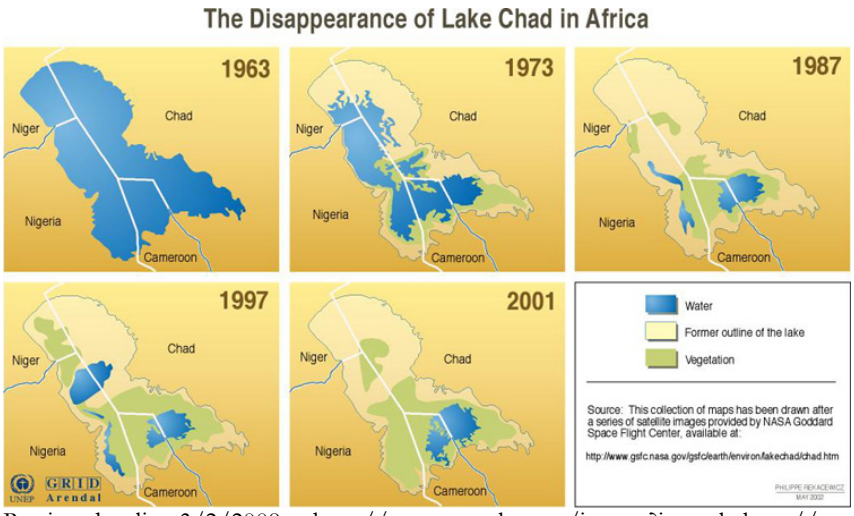
In the United States, the West has always been characterized by periods of drought. In recent times, however, they have lasted longer and been hotter. Many reservoirs are at record low levels. Las Vegas is rebuilding its Lake Mead water intake, because the lake is so low (50% of capacity) that it threatens to leave the city high and dry. One study suggested that Lake Mead—the largest man-made reservoir in the country—could go completely dry by 2021.[iii] (see Footnote 3 for a photo of Lake Mead)

Similar problems beset the Missouri River: by 2007, a multi-year drought had left reservoirs at record lows. Competition for water along the Missouri River, in the Southwest, and even in the Southeast is intensifying.

We cannot say for sure that the shrinking of lakes discussed above are the result of global climate change, or that it will continue. Most likely it is the result of several factors, including population increases, farming practices, and overgrazing. But the changes are consistent with those predicted by the climate change models.[iv] They illustrate that over time, if those changes occur, they are quite capable of causing great harm to rather large regions of the planet.

[i] Bell, Robin. (2008) Unquiet ice speaks volumes on global warming. *Scientific American,* February, 2008.

[ii]



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[iii] Lake Mead could be dry by 2021. (2/12/2008) *Scripps News.* Scripps Institution of Oceanography. Retreived online 3/2/2008 at http://scrippsnews.ucsd.edu/Releases/?releaseID=876. The photo below is a public domain photo retrieved online 3/2/2008 at Hhttp://en.wikipedia.org/wiki/Image:Hoover-dam-lake-mead.JPGH. The white "bathtub ring" is over 100 feet high.

[iv] Christensen, J.H., B. Hewitson, A. Busuioc, A. Chen, X. Gao, I. Held, R. Jones, R.K. Kolli, W.-T. Kwon, R. Laprise, V. Magaña Rueda, L. Mearns, C.G. Menéndez, J. Räisänen, A. Rinke, A. Sarr and P. Whetton. (2007). Regional Climate Projections. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Retrieved online at http://www.ipcc.ch.