Grim — almost apocalyptic — headlines seem to greet us daily. Pakistan faces the worst floods in almost a century, displacing *millions* from their homes and killing thousands. The UN is <u>calling</u> the floods "the greatest humanitarian crisis" the organization has ever faced. Russia <u>swelters</u> in unprecedented heat accompanied by horrific air quality. The average **daily** death toll is 700 in Moscow and total deaths may climb to 15,000 or even higher. The Russian economy, too, is being battered by the heat and will experience a loss of \$15 billion in lower GDP as a result. 1,110 are <u>missing</u> in China as a result of flooding from heavy rains. And of course the east coast has suffered record high temperatures for much of the summer. Yet Washington is doing absolutely nothing on climate change.

Are these extreme weather events related to climate change? The standard disclaimer applies: scientists cannot prove that any individual weather event is caused by climate change. But scientists are also finally willing to make the connection between the frequency and severity of these events and increasing temperatures. Professor Friedrich-Wilhelm Gerstengarbe of the Potsdam Institute for Climate Impact Research, for example, says "we have four such [weather] extremes in the last few weeks. This is very seldom. Global warming is one reason." And the chief of climate data management at the UN World Meteorological Organization agrees that "it looks like climate change is exacerbating the intensity of the extremes."

Dan has a <u>great post</u> from earlier this year that explains how to tell whether we're experiencing extreme but very unlikely events — what we'd call low probability but extreme events that show up on a probability distribution as a "tail risk" — more often. When they happen more extremely and more frequently we say the tail risk is a "fat tail." I'll quote him here:

With a normal distribution, after a short intial period, records should be broken infrequently — and when they are broken, it should only be asmall amount. ...[With] a fat tailed distribution [records are broken by an enormous margin, and more frequently].

Climate change already seems to be producing a fat tail distribution if this summer's events, and the 2003 Europen heatwave, are any indication.

Meanwhile, as the globe floods and burns, Washington has abandoned all efforts to pass climate legislation this year. The politics will get worse, not better, after November if predictions are accurate that the Democrats will lose a large number of seats in both houses

(and potentially even control of one or both bodies). I keep wondering, do policy makers in Washington lose sleep at night over their inaction in the fact of monumental catastrophe? Do politicians who deny that climate change is occuring reevaluate their positions in the face of thousands dying in floods and extreme heat? What more do they need to be jolted into action?