

Safe bet that this year will be one of the hottest yet

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OPINION: Every January for the last several years I've written articles looking back at the impacts of climate change on the preceding year and its likely consequences in the year ahead. And every year without fail, the picture gets clearer and, frankly, more disconcerting.

True to form, 2012 delivered another series of weather extremes. Britain began the year with the most severe drought in a generation. This was followed by weeks of torrential rain and widespread flooding, leading to 2012 being its second wettest ever.

Globally, 2010 and 2011 were respectively the wettest and second wettest years since records began. What goes up, comes down. Every one degree of temperature rise leads to a 7 per cent increase in how much water vapour the air can hold. Add in increased evaporation in drought conditions and you have a recipe for more regular severe flooding events. "It's basic physics that warmer air can hold more water, so when you get rain, it's likely to be heavier," said Dr Vicky Pope of the UK's Met Office.

Ireland, on this occasion, has been spared, but cast your mind back to our epic "once-in-800-year" flooding event in 2008 – and then again in 2009, leading to widespread disruption and economic losses of well over €100 million. What are the odds that we will have to endure yet another "once in a generation" flooding event within, say, the next couple of years?

Hottest year

Meanwhile, the United States sweated through its hottest year ever, with near-permanent drought conditions in many areas and thousands of weather records smashed.

Superstorm Sandy battered the US east coast in October, leaving a \$60 billion trail of wreckage – and blew climate change back on to the political agenda.

Last July saw the most dramatic melt across Greenland in over a century, affecting 97 per cent of the surface of the giant glacier, while on September 16th last, the Arctic sea ice pack collapsed to its lowest level in millennia.

Polar climatologists now project the complete disappearance of summer Arctic sea ice within five to seven years, ushering in a turbulent new climatic era in the northern hemisphere. More ominously for sea levels, researchers reported in November that the west Antarctic shelf is heating at three times the global average. Between 1958 and 2010, the region warmed by a dramatic 2.4 degrees. Expert assessments about our increasingly restive climate system are inevitably couched in the measured language of scientific uncertainty and probability.

Conspiracy theories

Climate deniers and media blow-hards on the other hand suffer no such qualms in dismissing hard evidence out of hand, clinging instead to conspiracy theories, and a seething distrust of "authority".

Instrumental global temperature records stretch back over 160 years, to 1850. All other things being equal, you might reasonably assume the odds of 2013 being among the ten hottest years since 1850 would be roughly one in 16.

Rather than contact the usual experts for yet more boring "evidence", this year I took a different approach and headed instead to those most unsentimental of prognosticators, the bookies.

What odds would Paddy Power offer me for a wager that 2013 will be among the top 10 hottest years globally since 1850? Instead of the 16-1 that random chance suggests, my odds were over 1,200 times worse, at 1-80.

In other words, I've just bet €80 this week and, if I win, I'll get my stake back, plus a solitary €1 coin in winnings next January. That's how absolutely confident Paddy Power are about a year that is just one week old. Of course, bookies aren't infallible, but would you seriously bet against them?

The same firm offered me odds at 7/2 of 2013 being the outright hottest year ever globally, while the Arctic ice minimum hitting yet another all-time low is priced at 11/8. For the last 30 years, global temperatures have been rising at the rate of 0.16 degrees per decade.

Eleven of the 12 hottest years have all occurred since 2000. February 1985 was the last month when temperatures dipped below average for the 20th century.

Regional cooling episodes, such as the 2008 and 2011 La Niña events in the Pacific, slightly lowered the rate of temperature increase.

This year, however, a La Niña warming event is forecast, which, if it is strong, could make the 7/2 odds on 2013 begin the hottest year ever, very good value indeed.

In just the first week of January 2013, Australia has endured its five hottest days in history, forcing its Bureau of Meteorology to add a new colour to national temperature charts to represent scorching new highs.

Happy new year – and welcome to our future.

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