

Notes from a Warming World No.78 Introducing 'climate whiplash'.

As I write this five days before publication the news is dominated by the Los Angeles fires which have driven 180,000 people from their homes, destroyed over 10,000 properties, consumed about 45sq miles of land and killed 24 people with many more unaccounted for. It has also caused property and economic losses valued at up to \$150b¹, making it the most destructive fire in LA's history and one of the costliest natural disasters in US history.

There has been much talk of the role of climate change in driving the fires, and in that talk a new term has entered our vocabulary: 'the climate whiplash effect'. The whiplash effect refers to rapid swings between extreme weather conditions.

These dramatic weather reversals, which are becoming increasingly common and pose significant challenges to humans and nature, are marked by rapid switches between severe drought and flooding; extreme heat and cold; and periods of abundant rainfall followed by prolonged dry spells.

California has become a prime example of this effect, where 'atmospheric rivers' (long, narrow bands of water vapour) can deliver several months' worth of rain in a few days, right after periods of extended drought.

The science behind climate whiplash directly connects the impact of global warming to atmospheric circulation patterns. As the global temperature rises, it disrupts established weather patterns and the jet streams which control them, leading to more erratic and extreme weather events. The greater the extremes, the greater the whiplash.

What has happened in Southern California illustrates the effect starkly. Here in the recent past they had two very wet winters (2022/23 and 2023/24), which caused severe flooding. Then followed a very hot, dry summer (2024), followed in turn by drought this winter (2024/25). And because the two very wet winters had produced abundant plant growth – which dried out last summer and was not dampened down this winter – the whole region was primed for fire.

On top of all of this, extremely strong, hot, dry, seasonal Santa Ana Winds have been blowing over the mountains from the northeast fanning the flames and warming on descent (like the Alpine Föhn).

So does climate change have a part in all this? Yes, definitely, because weather extremes of the kind just described are made much more likely by climate change. Though climate change didn't *cause* the fires, it had a big role to play in the run up, and as the planet heats will make wildfires ever more likely.

So long as we burn fossil fuels at the rate that we do (currently 80% of global energy production still comes from them) climate change will accelerate and with it – make no mistake – many more cases of climate whiplash will occur.

If after reading this piece you want to join us and do something locally get in touch at sustainablekeswick@gmail.com.

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Sustainable Keswick 12.01.25

¹ As of 14.01.25 the latest figures of losses are now between \$250 billion and \$275 billion according to AccuWeather. A Guardian source gives 12,000 structures destroyed.