

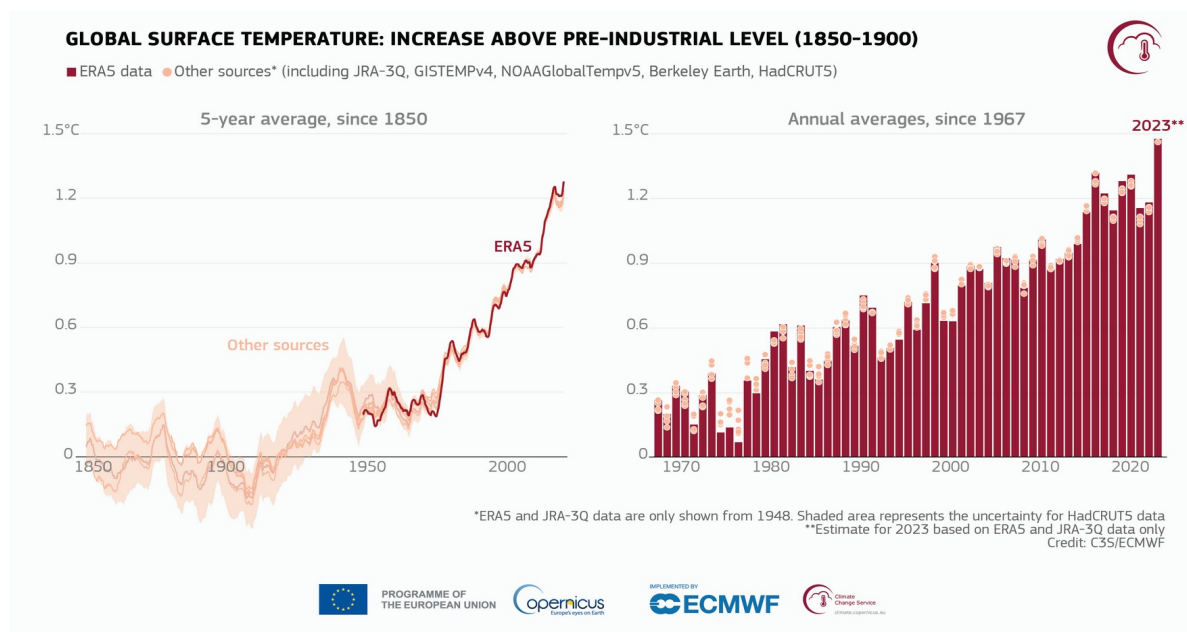


Are we over 1.5 degrees of warming?

The Met Office recently reported that 2023 was on the global average, the warmest year since 1850 and the tenth year in succession that the temperature has equalled or exceeded one degree above the pre-industrial period of 1850 – 1900. That level of warming is due to human activity releasing greenhouse gases, especially carbon dioxide into the atmosphere. The last few months of 2023 got even warmer due to the effects of El Niño in the Pacific. Even more recently, the EU climate monitor Copernicus and our own European Centre for Medium-range Weather Forecasts (ECMWF) have said that the yearly average to January 2024 was over 1.5 ° C above the pre-industrial average.

Climate researchers define the 'pre-industrial' period as 1850 – 1900 because it's the earliest period for which we have reliable temperature measurements. There are temperature values for earlier periods but these are derived from indirect measurement such as dissolved gases in ice cores or tree ring sizes. A few weeks ago, researchers published a paper in *Nature Climate Change* where they had studied the climate signature of sponges in the Caribbean Sea. They concluded that global warming may have started earlier in the 19th century. This would mean that we are underestimating the amount of warming that has taken place. However, other climate researchers think that there's too much uncertainty in these measurements.

Where does the figure of '1.5 ° C' come from? Since the Paris Climate Change Conference in 2016 (COP21), nations have agreed to limit the global average temperature rise to 1.5 ° C above the pre-industrial levels. So it might appear that we've gone past this limit into more dangerous territory. In fact, that's not the case as temperatures fluctuate due to natural variation and may push the temperature higher for while. But what we do see is that the long-term average is gradually increasing and we're getting closer and closer to having being permanently over that figure.



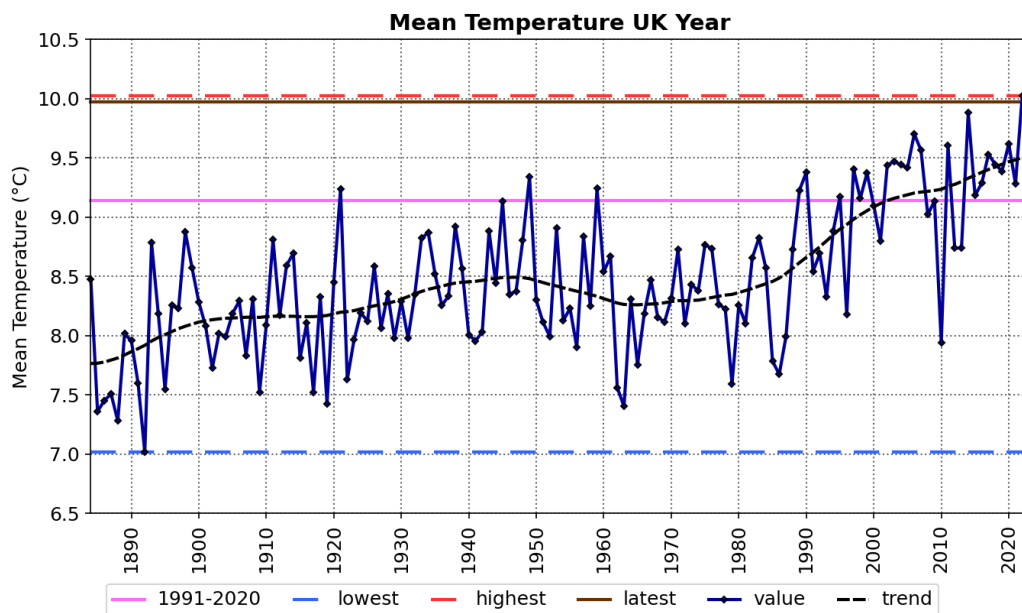
The 1.5 ° C figure is not a critical boundary – it does **not** mean that once past it, we will be on a fixed path to catastrophe. It is best thought of like a road speed limit: not an absolute

barrier but if exceeded an accident is more likely to happen. It's a safeguard to try and stop things getting worse and out of control. The consequences of a warmer global climate are already being seen, though the effects vary across the world. In the UK, we've been experiencing higher than average rainfall, with some areas being flooded on multiple occasions. According to the Met Office, Northern Ireland had its third wettest year since 1836 and the wettest since 2002. The summer of 2023 was the second warmest for central England since 1884. The average temperature across the whole of the UK is rising steadily, year on year.



Source: HadUK-Grid 01/01/2024 10:42

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It may seem that as individuals, or small communities, we are powerless to have any effect. On contrary, there are a number of things we can do. This year, 2024, is almost certainly going to be an election year. We will then have the opportunity to challenge the candidates on where they stand on climate change and what they're going to do about it. In fact there's nothing to stop us writing now to our sitting MP and asking for more action. It is also very clear that meat production has a large carbon footprint. Cutting down meat and dairy consumption would reduce that impact. If you're paying into a pension fund, or you're already drawing a non-state pension, make sure your money is invested ethically. It shouldn't be supporting the fossil fuel industries. We must also look after green spaces as they help to remove carbon dioxide and contribute to our well-being.

Richard Marshall

We need more members. Several of the current committee are stepping down very soon. If you're concerned about climate change, the future for your children or grandchildren please come and join us. Contact me: marshall@btinternet.com