JANUARY 2024 UPDATE

Beyond 1.5°C*

*The urgency for climate action.

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What happened?

Scientists at the EU's climate agency Copernicus released their findings last week on the state of the planet's climate. It made for stark, if not unexpected reading. The headline was that the planet was 1.48° Celsius hotter in 2023 compared to pre-industrial times. That's a mere whisker below the 1.5° Celsius target set by countries in the 2015 Paris Climate Agreement to avoid the most severe effects of warming.

But is it strictly right to compare this 1.48°C with the target set in Paris?

What is the 1.5 limit?

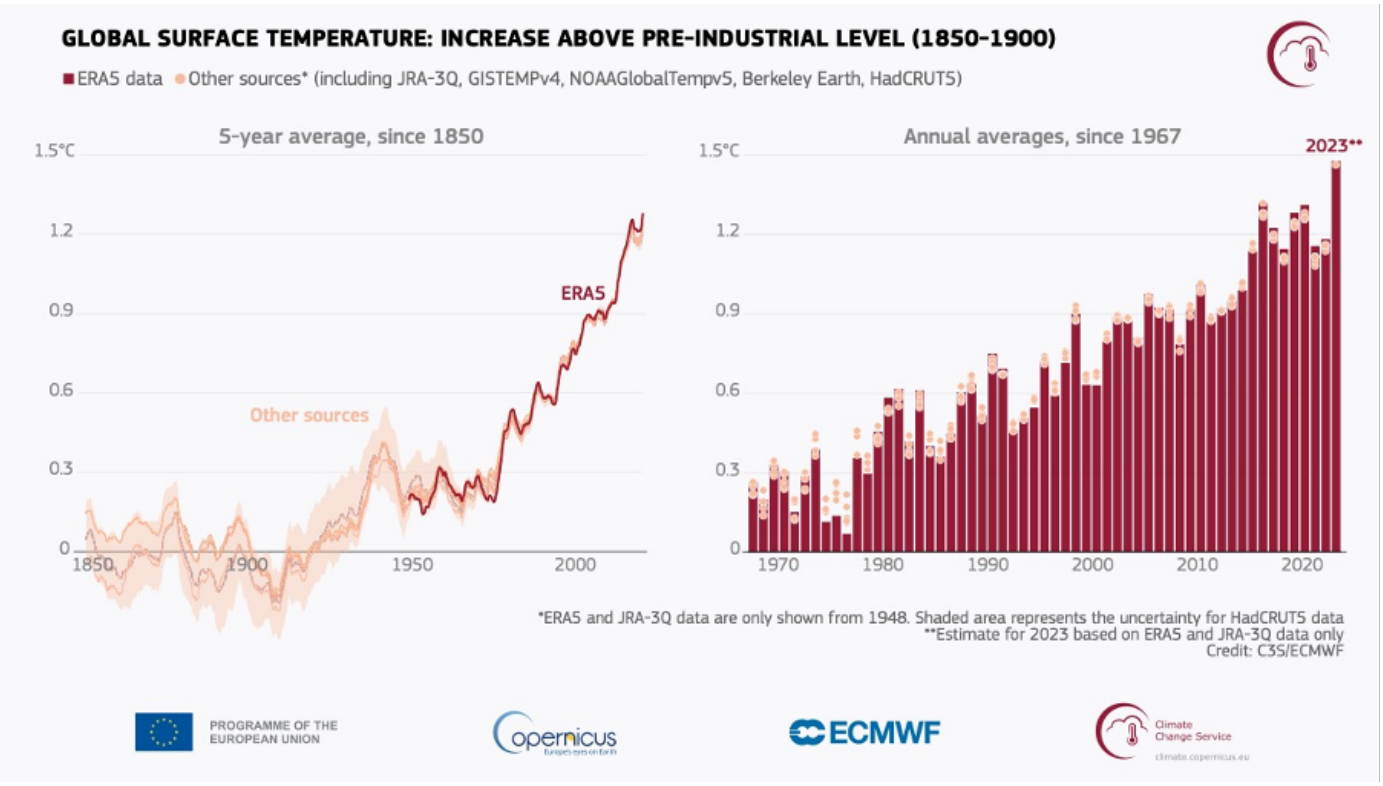
As we explained in our previous blog on 1.5°C, under the 2015 agreement countries agreed to "pursue efforts" to limit long-term global warming global temperature rise to 1.5°C. Going over this threshold every year for a decade or two would see a significant exacerbation of the effects of global warming, including longer and more extensive heatwaves, more intense storms, wildfires and drought.

Because of this, 1.5°C has become the standout number in climate change discourse, one which too often can lose its catastrophic effects in a sea of technical jargon, numbers and projections.

What did Copernicus say, and are we close to breaking 1.5°?

It's important to reiterate that we are talking here about longer-term global warming rather than a single year. The 1.5° target is meant as averaged over a decade, or more. What the EU's climate agency has actually said is that 2023 alone was 1.48°C, but what about longer term averages?

As shown by Copernicus themselves, the 5-year average temperatures are still a bit below 1.5°C, somewhere between 1.2°C and 1.3°C (left on the figure below). So technically we cannot say at this point in time that the Paris Agreement has been broken.



Global surface air temperature increase relative to the average for 1850-1900, the designated pre-industrial reference period, based on several global temperature datasets shown as 5-year averages since 1850 (left) and as annual averages since 1967 (right). Credit: C3S/ECMWF.

It's also worth saying that apart from increased greenhouse gas concentrations, the record breaking global average temperatures are in part driven by a unique meteorological event called El Niño. El Niño sees warmer than average sea surface temperatures across the middle and eastern equatorial Pacific Ocean to the coast of Peru. Whilst this may seem like a localised phenomenon, its effects are seen around the world. In 2016, when El Niño last occurred global temperatures increased by over 0.1° due to the phenomenon alone [1].

Therefore, as Copernicus highlight themselves, there is a good chance that in the short-term we will exceed 1.5°C above the pre-industrial level (January or February 2024 in particular), but it is not expected to become the longer term norm just yet.

However, chances are it will happen...

However, let's not pretend this is in any way a good thing. According to Copernicus' 5-year average, we have already warmed the world by over 1.2C, and estimates are that recent warming is between 0.15° and 0.2° per decade since the 1970s [2]. This would see, along current warming rates, a break of the Paris agreement limit in the true sense sometime in the 2030s.

Why 1.5 anyway?

It's worth saying that when creating the 1.5°C goal, there was nothing specific to 1.5. If it was slightly more or less, the effects of climate change would not be unduly better or worse. What tried to be captured in Paris with 1.5 was a sense of urgency. The biggest issue in climate change is trying to make long term risk seem immediate, and the 1.5 degrees target was used to stir action. Essentially - that there was a small

window of opportunity through which we can still achieve a future without the worst consequences of climate change.

However, if we miss 1.5 degrees where do we go next? Could this only fuel the growing idea of fatalism in the public? Quite possibly. But, as pointed out in an excellent article by the Washington Post, even if 1.5 is broken all is technically not lost. However, make no mistake, it will be a lot harder to bring down global temperatures once the cat is out of the bag.

Conclusion

We are still at least a decade away from Paris' 1.5 degrees long-term warming limit being broken. Our actions over those 10 years will decide the type of world ever single living being will experience for the next millennium at least. To protect our communities, ecosystems and economies for the generations to come we must reduce our carbon emissions now.

"Not only is 2023 the warmest year on record, it is also the first year with all days over 1°C warmer than the pre-industrial period. Temperatures during 2023 likely exceed those of any period in at least the last 100,000 years."

SAMANTHA BURGESS
Deputy Director of the Copernicus Climate Change Service

ESG Book

At ESG Book, we are launching our new Decarbonisation Score, a unique tool which investors can use to analyse and verify the emissions reductions at a company or portfolio-level is in line with a 1.5 degree world.

Stay tuned for more.

References

1 https://www.nasa.gov/press-release/nasa-noaa-data-show-2016-warmest-year-on-record-globally
2 https://earthobservatory.nasa.gov/world-of-change/global-temperatures





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