

## CLIMATIC WARMING ON A GLOBAL SCALE

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For generations, climate scientists have taught the public that “not all weather is the same,” describing climate change as changes in weather patterns that gradually fluctuate widely over decades.

But when you look at weather on a global scale, it’s uncharted territory. Here, we use daily observed global temperature and humidity to detect fingerprints of exogenous climate change and conclude that the entire planet is warming.

Traces of climate change can be seen in the global observational record every day since the beginning of 2012 and every year since 1999. Even ignoring long-term warming trends, the evidence remains conclusive. This not only complements traditional climate change detection, but also opens up a broader perspective on communicating regional weather events and changing climate change narratives. (Sippel, 2020)

Scientists believe that an overheated world will exceed critical temperature limits for the first time in the next few years. Researchers say there is a 66% chance that global warming will exceed the 1.5°C threshold by 2027. The likelihood has increased due to emissions from human activities and the potential for an El Niño event later this year. Scientists stress that if the world exceeds limits, the impact will be worrying, but only temporary. If the limit is exceeded, world temperatures will be 1.5°C warmer than before industrialization really kicked off fossil fuel emissions in

the late 19th century.

The 1.5°C value has become a hallmark of global climate negotiations. In the 2015 Paris Agreement, countries agreed on a “goal” to limit global temperature rise to 1.5°C. If temperatures exceed 1.5°C per year for 10 or 20 consecutive years, the effects of global warming will be greater, including longer heat waves, more severe storms and more wildfires.

But exceeding this level in the coming years does not necessarily mean a violation of the Paris Agreement. Scientists say there is still time to curb global warming by drastically reducing emissions: The World Meteorological Organization (WMO) predicts that global temperatures will exceed 1.5°C in a given year after 2020, with warming expected to be below 20°C within five years. %. That rose to 50% last year and now to 66%. (McGrath, 2023)

Recent statements from the US, EU, China and Russia show that some of the world's largest organizations are formally acknowledging the consequences that the planet will face if we do not commit to change. Indeed, at a recent virtual climate summit of 40 world leaders, the United States pledged to cut greenhouse gas pollution in half by 2030, underscoring how critical this decade will be for decisions to avoid the worst consequences of climate change.

The combined efforts of the world’s most influential countries offer great hope for the future of our planet. Despite differences and competition between countries, there is a recognition that climate change transcends these differences and is an issue that requires global engagement. The more we work together, the more we can prioritize our commitment to a sustainable global future and the more aligned the goals of the projects we support become. (Van het Hof, 2021)

#### **References:**

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