

EPISODE 3

Carbon emissions have created our warmer temperatures



2 ANSWERS TO SCEPTICAL QUESTIONS

“Is a 1.2°C increase in global temperatures really a cause for concern?”

When we are talking about **1.2°C**, it’s important to understand that this **represents the global average**. It is crucial to recognise that the impact of **global warming is not evenly distributed**. In general, land areas are experiencing more intense warming than oceans. In conclusion, the local experience of global warming is not the same for everyone, but everywhere around the planet, we are experiencing changes. And just a **small change** in global average temperature **can create surprisingly large changes** in how the Earth system works.

“Why should we worry about adding more CO₂ to the atmosphere when the Earth is capable of absorbing it?”

While the Earth does absorb some of the **CO₂** we release, a large share of CO₂ emissions we generate **remains in the atmosphere, contributing** significantly to **global warming**. Although land vegetation and the oceans are able to absorb CO₂, their capacity is not limitless. Also, the process of CO₂ absorption in the oceans results in ocean acidification, posing a threat to marine ecosystems. To avoid reaching critical temperature limits and mitigating these risks, it is imperative that we take **substantial action to reduce emissions** and safeguard our environment.

3 FAST FACTS

51 %

– the approximate amount of the CO₂ produced by humans that is currently absorbed by land (29 %) and ocean (22 %) – down from 60 % in 1959¹.

9 in a row

– the last nine years (2014-2022) are the warmest on record².

2-3 x

– how many times faster the Arctic is warming compared to other parts of the planet, with certain parts of the Arctic experiencing an even faster warming rate³.

¹ Le Quéré et al. 2018) (NASA 2023), ² Climate.gov 2023, ³ Deshayes 2021

3 KEY TAKEAWAYS

- ▶ We possess a clear and actionable understanding of the causes and sources of global warming. This knowledge empowers us to take informed action and effectively confront the challenge of climate change.
- ▶ The consequences of global warming vary locally, with some areas experiencing more warming than others.
- ▶ There are limits to the Earth’s ability to absorb CO₂, making it essential to take rapid action to reduce emissions and protect the environment.

3 ESSENTIAL RESOURCES

- ▶ This [short video by NASA](#) visualises the global warming from 1880 to 2022.
- ▶ [Overview](#) of global greenhouse gas emissions by sector from Our World in Data.
- ▶ CO₂ and greenhouse gas emissions [country profiles](#) by Our World in Data.