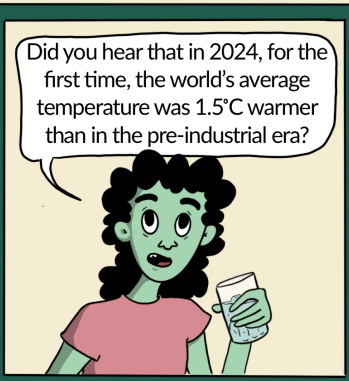
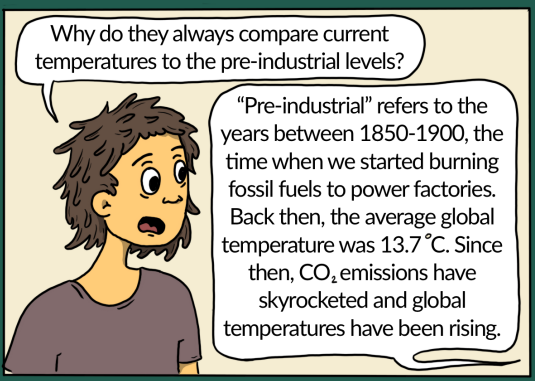
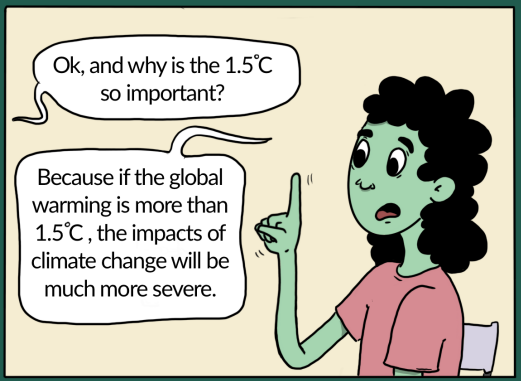
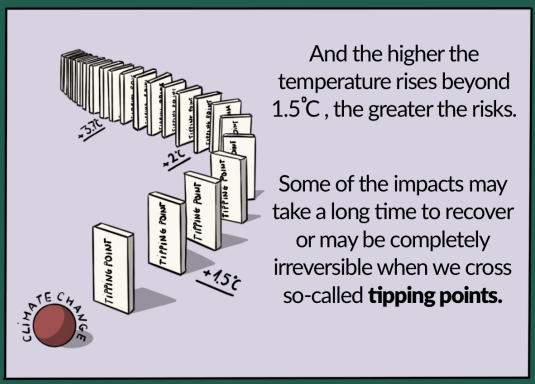
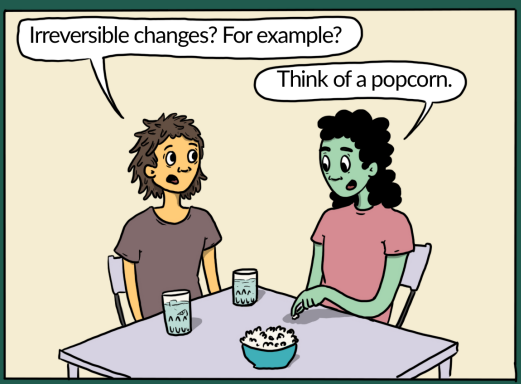
A FORESEEN OVERSHOOT



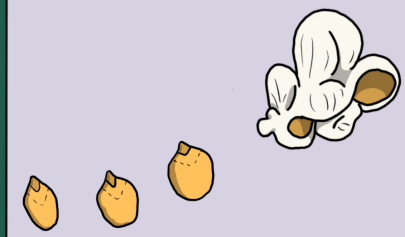




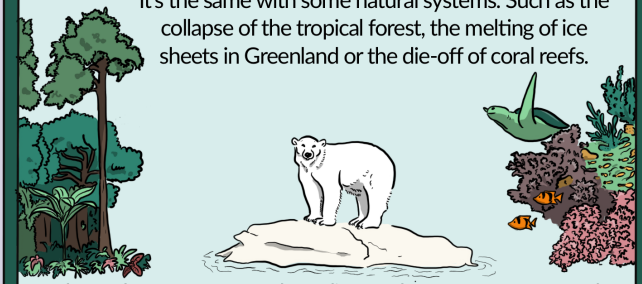




A corn kernel gets bigger as it heats up, but once it pops, you can't turn it back into a kernel.



It's the same with some natural systems. Such as the collapse of the tropical forest, the melting of ice sheets in Greenland or the die-off of coral reefs.

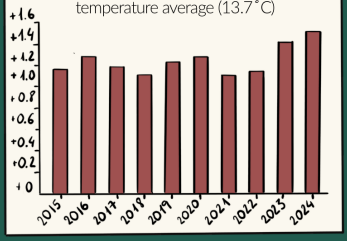


These changes can speed-up climate change even more, and drastically threaten our communities and entire ecosystems.

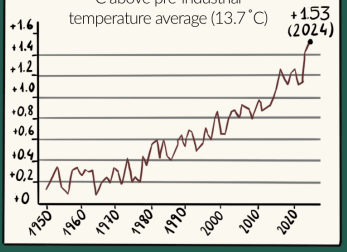
So, if we don't do anything, does it mean that it's going to get hotter every year?

The climate is very variable.

Some years might be colder than others.

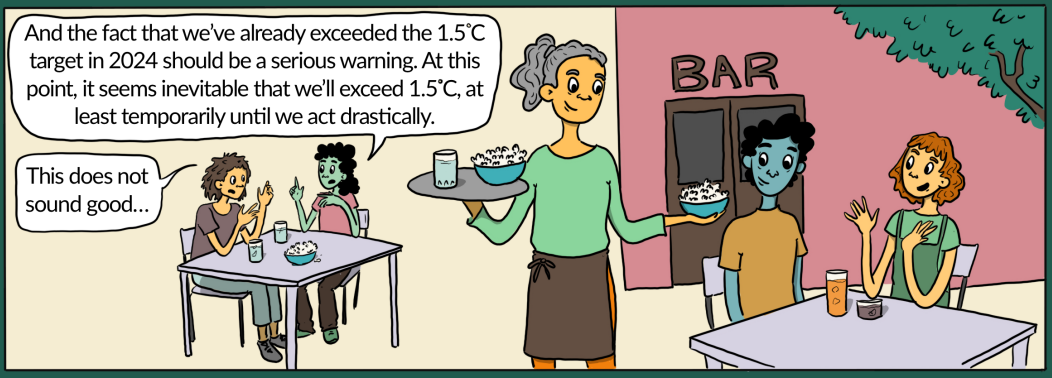


But the trend is clear. The planet is getting warmer.



And the fact that we've already exceeded the 1.5°C target in 2024 should be a serious warning. At this point, it seems inevitable that we'll exceed 1.5°C, at least temporarily until we act drastically.

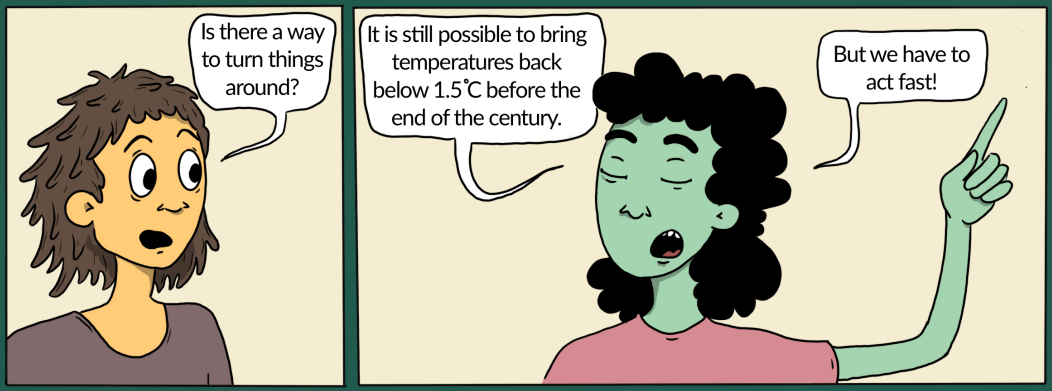
This does not sound good...



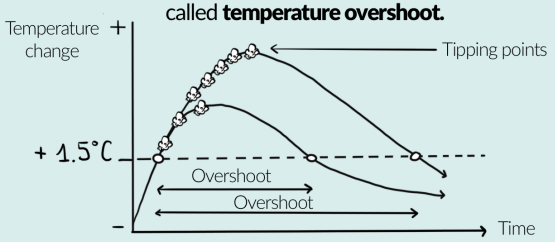
Is there a way to turn things around?

It is still possible to bring temperatures back below 1.5°C before the end of the century.

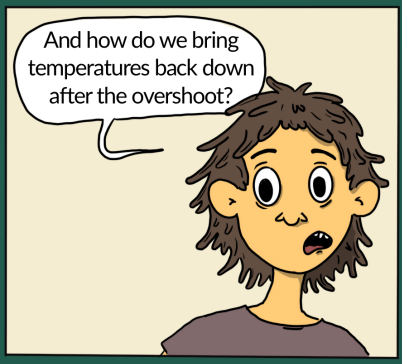
But we have to act fast!

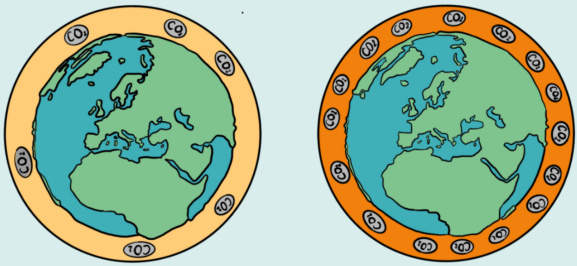


The time between going over 1.5 C and bringing it back down is called **temperature overshoot.**

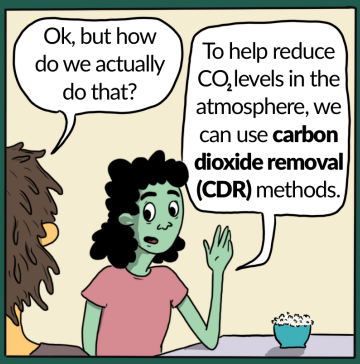


And of course… The higher the temperatures rise and the longer the overshoot lasts, the more irreversible tipping points we risk crossing.

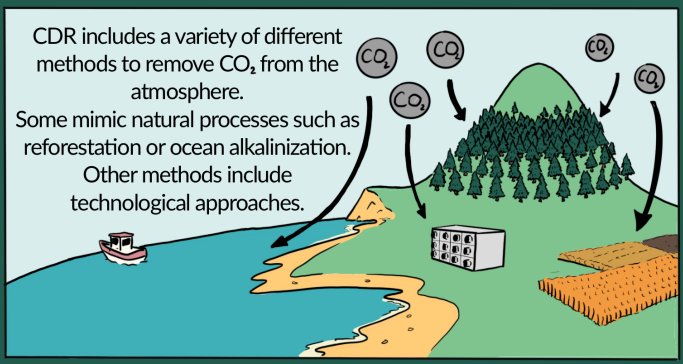




The more CO_2 there is in the atmosphere, the higher the global temperature. And the other way around, lower CO_2 levels mean lower global temperature.
But CO_2 stays in the atmosphere for a long time. Once it is emitted, a big part remains there for centuries.
So, to decrease the global temperature we need to reach net negative emissions, which means removing more CO_2 from the atmosphere than we release.

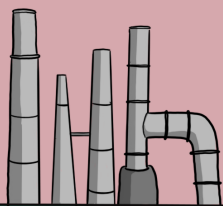


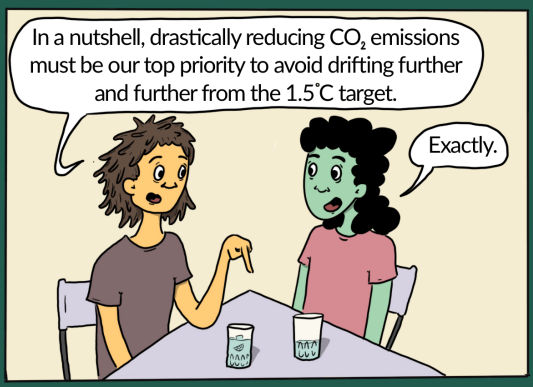
CDR includes a variety of different methods to remove CO_2 from the atmosphere.
Some mimic natural processes such as reforestation or ocean alkalinization.
Other methods include technological approaches.



CDRs are still being developed. We're not sure yet how well they work, how affordable they are, or what side effects they could cause. So before scaling them up we need more research.

For now, CDRs are mainly being considered for compensating for emissions that are very hard to reduce, like some industrial processes.





A comic by:

RESCUE

Additional resources:

- State of the Global Climate 2024, WMO
- Overshoot: what does it mean to exceed and return to 1.5 °C?, CMCC
- Why Climate Goals Aren't a Lost Cause—Even If We Overshoot Them, Scientific American
- Climate Classroom: Carbon Dioxide Removal, RESCUE
- Science summary: Climate change mitigation scenarios with a broad CDR portfolio, RESCUE

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