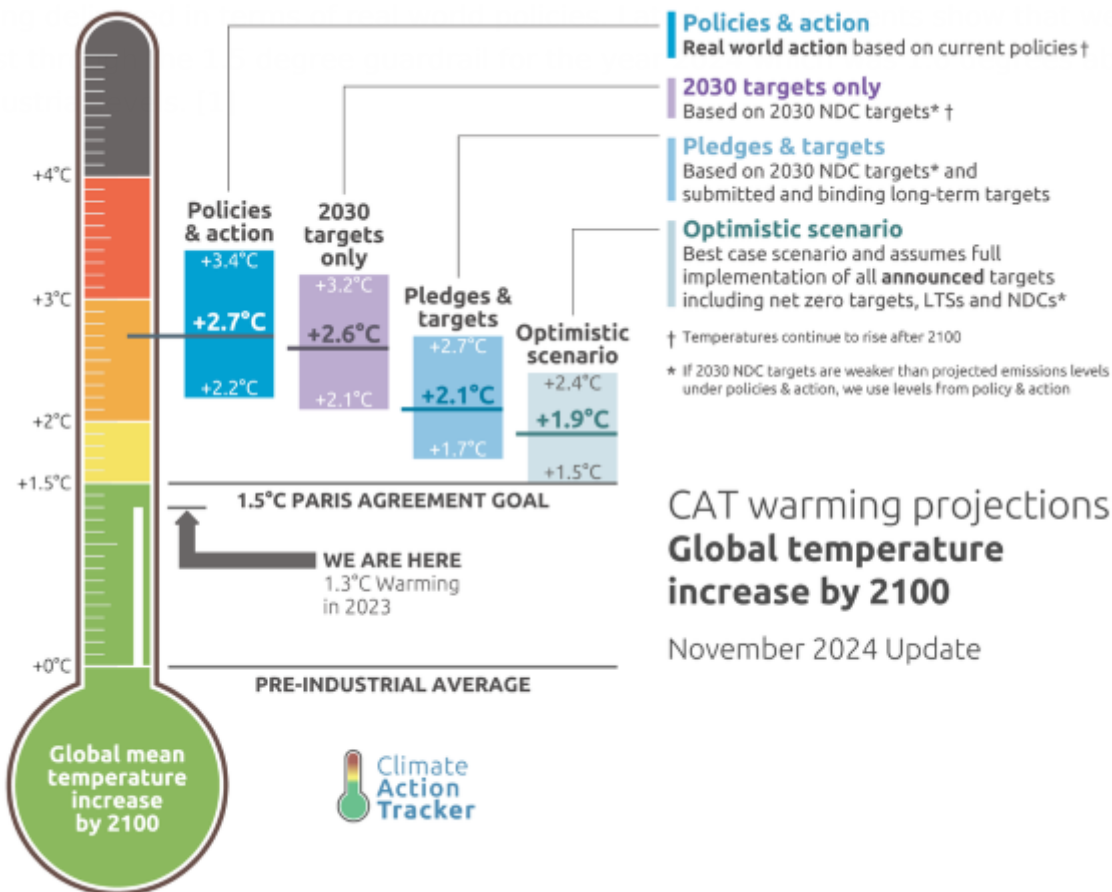


The Climate & Nature Emergency

The science is clear: we face an unprecedented global climate and nature emergency.

The effects of this emergency include **floods, wildfires, extreme weather, mass loss of wildlife, crop failure and the mass displacement of people and loss of life**. This is not a distant prospect - these effects are being suffered right now, and will continue to be disproportionately suffered, by those who have done the very least to cause the crisis. The chart

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The amount of heating may not sound much, but there is a real danger of it leading to tipping points and feedback loops. These are irreversible domino effects beyond which there is little we can do to control run-away warming. Plus, right now, every 0.1 degree of warming places 100 million people in unliveable temperatures. [3]

On top of this, many scientists believe that habitat destruction and biodiversity loss is equally, if not even more, important and that we are right now in planet earth's sixth mass extinction, driven by unsustainable human activities.

To have any effect on slowing down global heating and loss of nature, we need urgent systemic and long-term changes to how we do things. XR's purpose is to highlight the fact that our window of opportunity is closing rapidly and compel those in power to act.

References: [1] : <https://www.reuters.com/business/environment/2024-was-first-year-above-15c-global-warming-scientists-say-2025-01-10/>

[2]: <https://climateactiontracker.org/>

[3]: <https://academic.oup.com/bioscience/article/74/12/812/7808595>

Climate and Nature Quiz - full answers and references

1 Water Pollution

UK water pollution has been in the news a lot lately. Approximately how many times was raw sewage discharged into rivers and seas by privatised UK water companies in 2023?

Answer

According to the Environment Agency data, in 2023, privatised UK water companies discharged raw sewage into English and Welsh rivers and seas approximately 464,056 times. Even more alarmingly, the recent State of Our Rivers Report [State of Our Rivers](#) shows that storm overflows contribute to at least 11% of total ecological health standard failures in English rivers – this is the real consequence of the shocking numbers in today's gory data. Sewage is just part of the picture. Our rivers are in crisis, facing a cocktail of pollution loads on monumental scales.

2 Nature

Since records began in 1970, wildlife populations have dropped around the globe, by an average of how much?

Answer

According to the [World Wildlife Fund's Living Planet Report 2024](#), the average size of wildlife populations has fallen by a staggering 73% between 1970-2020. The web of life that sustains us all is in crisis and the decline is caused by habitat loss, overexploitation, pollution, and climate change. But we can still stop the decline.

3 Food Prices

Global heating is already causing harvests to fail, with knock-on impacts on the cost of food. How much was added to the UK average household food bill by climate change for 2022 and 2023?

Answer

Independent analysis commissioned by the **Energy and Climate Intelligence Unit** (ECIU) found that, compared to 2021, British households likely paid an extra £605 for food in 2022 and 2023 due to climate change impacts and historically high oil, gas and fertiliser prices. Climate change threatens our food supply and will cause our food bills to climb ever higher.

4 The Cost of Going Green

The UK government often talks about the cost of measures to 'green' our economy. Which is cheaper – preventing climate breakdown or dealing with its consequences?

Answer

A **2024 study** published in the journal Nature investigated the specific effects of global warming on the economy for the first time, taking into account chain reactions and quantifying the enormous economic damage. If we take action today and meet the two-degree target, the cost of climate protection measures will be six times cheaper than doing nothing. To date, climate change has caused over **\$3.6 trillion** [£2.85 trillion] in damage since the year 2000 and, without urgent and significant action, global GDP could drop by up to 22 per cent by 2100.

5 Cows

Cows are ruminants; their stomachs allow them to digest fibre-rich foods. This produces methane expelled as gas when cows belch. Approximately how many pounds of methane does one cow produce annually?

Answer

Every year, a single cow produces between 154 to 264 pounds of methane. There are around 1.5 billion cows raised for meat production all over the world. Not counting for the emissions of any other livestock, 1.5 billion cattle emit at least 231 billion pounds of methane gas every year.

Methane is a greenhouse gas that is 28 times more potent than carbon dioxide (CO₂) when trapping heat in the atmosphere. The gas is **estimated** to be responsible for about 30% of the rise in temperatures since the Industrial Revolution.

6 Plastics and Seas

How many tons of plastic are estimated to enter seas annually?

Answer The International Union for Conservation of Nature **estimates** that 14 million tons of plastic enter our seas annually. That's equivalent to the weight of five blue whales entering our environment every hour. Scientists believe there could be up to 10,000 times more plastic particles on the sea floor than on its surface and many scientists have **warned** that by 2050, more plastic

will be in the sea than fish (by weight).

More information:

If you want to know more about the science of climate and ecological breakdown, visit our webpage [Emergency on Planet Earth](#). Dr Emily Grossman (with the support of the XR Scientists community and a wide range of experts) lays out the facts. Embedded on the first page you will find our two part talk, updated June 2023 -

Part One - Heading for Extinction

Part Two - And What To Do About It
