

It's now or never: Scientists warn time of reckoning has come for the planet



Volunteers support firefighters tackling a wildfire next to the village of Kamatriades on the Greek island of Evia. Photograph: Angelos Tzortzinis/AFP/Getty Images

The IPCC is unequivocal: we must take urgent action to curb global heating and prevent catastrophe. Will our policymakers and the Cop26 conference be up to the task?

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t the end of the 60s sci-fi classic, *The Day the Earth Caught Fire*, the camera pans across the *Daily Express* case room to a front page proof hanging on a

wall. “World Saved”, screams the headline. The camera pans. “World Doomed”, announces the proof beside it.

Which page will the printers be told to select? We never find out, for the film concludes without revealing the fate of our planet whose rotation has been sent spiralling out of control by simultaneous Soviet and US atom bomb tests. All we know is that Earth’s fate hangs in the balance thanks to human stupidity.



Scientists issue a climate code red

Such a vision may be the stuff of popular entertainment but it comes uncomfortably close to our own uncertain future, as highlighted last week by an **Intergovernmental Panel on Climate Change (IPCC) report**, which effectively announced “a code red” warning for our species. Unequivocal evidence showed greenhouse gas emissions were propelling us towards a calamitous fiery future **triggered by extreme climate change**, it announced. Only urgent reductions of fossil fuel emissions can hope to save us.

It was a vision vividly endorsed by scientists, normally the most circumspect of commentators about world events. “Our future climate could well become some kind of hell on Earth,” said Prof Tim Palmer, of Oxford University. Or, as Prof Dave Reay, executive director of Edinburgh University’s Climate Change

Institute, put it: “This is not just another scientific report. This is hell and high water writ large.”

Certainly the numbers outlined in the report were stark and strikingly emphatic in comparison with past, far more cautious, IPCC offerings. As it makes clear, humans have pumped around 2,400bn tonnes of carbon dioxide into the atmosphere since 1850, creating concentrations of the gas that have not been seen on Earth in the last 2 million years.



A water hose runs empty for a volunteer fighting forest fires near the village of Pefki on the Greek island of Evia. Photograph: Angelos Tzortzinis/AFP/Getty Images

Heatwaves and the heavy rains that cause **flooding** have become more intense and more frequent since the 1950s in most parts of the world, and climate change is now affecting all inhabited regions of the planet. Drought is increasing in many places and it is more than 66% likely that numbers of **major hurricanes and typhoons have risen** since the 1970s. “If there was still a need for a proof that climate changes is caused by human activities, then this is the report that provides it,” said Prof Corinne Le Quéré of the University of East Anglia.

And the consequences of humanity’s massive act of atmospheric interference are now clear: what is hot today will become hotter tomorrow; extreme floods will become more frequent, wildfires more dangerous and deadly droughts more widespread. In short, things can only get worse.

Indeed, by the end of the century they could become threatening to civilisation if emissions are allowed to continue at their present rate. “That might seem like a long way away but there are millions of children already born who should be alive well into the 22nd century,” added Prof Jonathan Bamber of Bristol University, another report author.

In fact, they could become utterly catastrophic with the occurrence of world-changing events – such as continent-wide forest die-backs or collapsing Antarctic ice sheets, says Prof Andrew Watson of Edinburgh University. “The IPCC report gives a comprehensive update on the knowns of climate change, and that makes for grim reading. But it also makes the point that climate models don’t include ‘low probability-high impact’ events, such as drastic **changes in ocean circulation**, that also become more likely the more the climate is changed. These ‘known unknowns’ are scarier still.”

The new IPCC report is certainly a very different, uncompromising document compared with previous versions, as meteorologist Keith Shine of Reading University pointed out. “I was heavily involved in IPCC’s first assessment report back in 1990. We weren’t even sure then that observed climate change was due to human activity. The IPCC now says the evidence is ‘unequivocal’. That means there is no hiding place for policymakers.”

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Prof Rowan Sutton

The crucial point is that this report was agreed not just by scientists but by government representatives on the committee, men and women who have made it clear they are also convinced of the urgency of the situation. “They also see the direct link between greenhouse gas emissions and forest fires, floods and other recent extreme weather events, and that makes it essential for their own governments to act,” said Lord Deben, chair of the UK’s **Climate Change Committee**.

At the Paris climate meeting in 2015, those **governments pledged** to try to keep temperature rises well below 2C, and not more than 1.5C if possible, from pre-industrial days. The trouble now is that the world has already heated up by almost 1.1C, which means only drastic cutbacks in emissions will succeed in

preventing far more serious, intense global warming. It will be tight going. The most ambitious of emission scenarios described by the IPCC offers less than a 50% chance of keeping below that 1.5C threshold.

Prospects for limiting global warming to 2C are better but will still require reductions far in excess of those that have been pledged by nations in the run up to **Cop26**, the UN climate summit to be held in Glasgow in November. “It is plain that any hopes that climate change might turn out to be ‘not as bad as expected’ were forlorn,” said Prof Rowan Sutton, of Reading University’s National Centre for Atmospheric Science. “It is happening now and it is happening very fast. Dealing with this crisis means taking urgent actions.”

That will not be an easy task, however. As Nick Starkey, director of policy at the Royal Academy of Engineering, pointed out last week. “The UK is not on track to meet existing carbon targets and our goal of 78% emissions reduction by 2035 will not be reached without deep energy efficiency measures,” he said.

What is needed is “a society wide vision”, a national plan that would be instigated to ensure implementation of all the different policies – from transport to power generation and from home heating to farming – that will be needed to make sure emissions are cut as quickly as possible. “We need to put policies in place throughout society otherwise our targets will just become empty promises,” said Joeri Rogelj, director of research at the Grantham Institute, Imperial College London.

It is a suggestion backed by Lord Deben. “In the UK, we need a new planning act that ensures all local authorities have to take climate change into account every time they make a planning decision. At present, they get absolutely no advice about how to go about this business.” Such processes would ensure that the fine detail of ensuring carbon emissions are controlled and mistakes – such as the recent granting of planning permission for a **new coal mine in Cumbria** – are not repeated, he added.



San Francisco's sky turns orange from wildfire smoke in September 2020. Photograph: John G Mabanglo/EPA

However, it will take considerable, sustained effort for the nation to keep up such efforts. On Tuesday, **national front pages were filled** with images of burning Greek villages and lurid headlines. "PM: wake up to red alert to climate crisis," warned the *Daily Express*; "As doomsday report warns of apocalyptic climate change: can UK lead world back from the brink," asked the *Mail*; while the *Telegraph* announced "UN warns of climate 'reality check'". Given that many of these papers have gone to lengthy efforts in the past to denigrate climate science and to question the reality of global warming, these were radical announcements. It remains to be seen just how long each publication remains committed to the science.

"The climate story was all over the front pages on Tuesday but by Friday, three days later, it was hardly mentioned," added Prof Martin Siegert of Imperial College, London. "Yet this is the most important thing that humanity needs to do in the next 30 years. It is going to change our lives, it is going to change the way we regard ourselves on the planet. And if we don't, we are going to stoke up huge problems for our children. But after three days we seemed to be forgotten despite the fact this is something that needs decades of consistent, persistent work."

Siegert added that it had been estimated that investment levels equivalent to 1% of GDP are needed to ensure the country's transition to net-zero status.

“However, we are currently spending about 0.01%... a 100th of that estimated price tag. And this is also well below what the government is spending on things that will actually add to our emissions, such as airport expansion plans and the tens of billions it has pledged on new road schemes, which will only make it easier to drive around and burn more fossil fuel.”

These are all issues for the UK to hammer out, as a matter of urgency, over coming months, although the opening of the Cop26 conference in Glasgow is going to be an even more pressing event. At the meeting, which begins on 1 November, delegates from more than 190 nations will gather to hammer out a deal that will determine just how hot life will get on Earth. At Paris, in 2015, nations pledged emission cuts that now urgently need to be updated or global temperatures will soar to well over 2C. Similarly agreements will have to be reached on how to phase out coal power stations as quickly as possible, to protect carbon-dioxide-absorbing forests, and to agree aid for developing nations to help them survive the impacts of global warming.

It will a fine-run thing and it is very likely that we will not know if negotiators succeed until the very last minutes of the Glasgow conference. In this way we will learn the planet's fate in November, exactly 60 years after the cinematic release of *The Day the Earth Caught Fire*. We may then have a better idea of whether “World Saved” or “World Doomed” was the right front page headline.