Nick Couldry　　　　　　　　Anna Bevan　　　　　　　　May 14th, 2025

Nick Couldry: Using AI for trivial tasks hurts the planet

*Data centres around the world consume vast amounts of electricity and water. In London, Thames Water has expressed great concern with possible shortages. **Nick Couldry** believes that we must stop using AI for trivial tasks every day. Without this behavioural change, we risk worsening climate change. He discussed the environmental consequences of AI in this Q&A with **Anna Bevan** for LSE's IQ Podcast.*

Why are data centres so problematic for the environment?

It's primarily the electricity usage. Computer chips require vast amounts of power to run calculations. Some countries—such as Ireland—are using a high percentage of their national electricity on data centres. India is also heavily affected. In Northern Virginia, near Washington, DC, there's one of the world's largest collections of data centres.

But it's not just about electricity. These data centres heat up, and that heat must be mitigated to prevent damage to the systems. The main cooling method is water—specifically, fresh water, which is already in scarce supply.

How much water do they consume?

Well, you might not think a data centre would need much water—other than for engineers to have a drink. But in fact, the heating generated by the data centres creates dangerous levels of heat.

In the early days, companies tried to locate data centres in far northern regions where they could rely on the external temperature to cool them down. But in most places, that simply isn't adequate. You need water—specifically, fresh water.

In West London, for example, Thames Water is extremely concerned about water shortages, and one contributing factor is data centre usage. According to some estimates, a large-scale data centre—of the kind needed to run our emerging AI systems—can use between 1.5 and two million litres of fresh water a day. By comparison, the average use of fresh water in the UK is about five million litres per day. That's a huge proportion, and fresh water, as we know, is in short supply, particularly in some parts of the world.

Have we started to feel the effects of that yet?

Yes, in some parts of the world. Another aspect of AI that comes into play is the devices we use to access it—or to do anything on social media or the web—such as smartphones. These rely on batteries, which are made with lithium.

There are only two ways of producing lithium. One involves pumping water to the surface and allowing it to evaporate, leaving lithium behind. That method is used in places like the Atacama Desert in Chile—obviously, a desert and desperately short of water.

The indigenous peoples there have become extremely angry, because they are facing water shortages while vast amounts are being used—wasted, as they see it—to extract lithium for computer batteries. Similar disputes are taking place in Argentina. Incidentally, Elon Musk has a very close relationship with the Argentine president—because he wants the lithium.
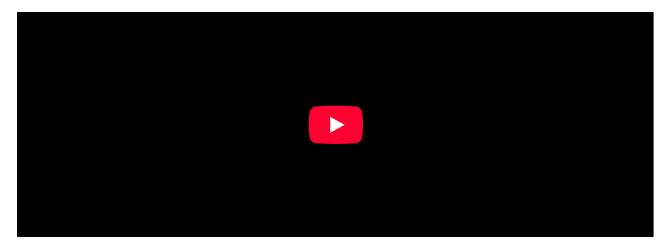
Do you think AI is accelerating climate change?

Yes—if the electricity it consumes doesn't come from carbon-neutral sources, then it inevitably contributes to climate change. And it uses water—if that starts to happen on a vast scale, the environmental risks could be significant.

Of course, AI is also essential to climate science. The big models we use to track global warming rely on it. But that's a justified, concentrated use.

What's less justifiable is using AI for trivial tasks every day. That's the behavioural shift we need to reconsider. Unless we do, we risk worsening climate change through the unchecked use of AI.

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Are all data centres the same, or are there different types?

That's a tricky one. Data centres do vary in scale. There are smaller ones, but the type being built today—so-called hyperscale data centres—are the ones consuming vast amounts of electricity and water. These are the ones we need to be thinking about seriously when considering sustainability.

AI is advancing rapidly—its use has expanded massively in just the past two years. And the more complex the tasks we assign to it, the more computational power is needed, which in turn requires larger and larger data centres.

I read that a 100-word email generated by an AI chatbot uses the equivalent of a 500ml bottle of water.

Yes. There are various calculations now about how AI is increasing energy and resource use, especially water. Some suggest that using ChatGPT to find something you could also Google may use up to six times as much electricity.

That's because a Google search uses a complex algorithm to present you with a list of relevant websites—you then click to find the answer. AI doesn't work that way. It processes everything across a vast number of sources to generate an answer, based on a large language model that predicts the next word in your query.

That prediction process requires a massive amount of calculation. Think about how many possible next words there are—it has to rule out most of them and produce something plausible. That's far more computationally expensive than a standard search.

And we're now increasingly relying on it instead of Google?

Exactly. And sometimes you're not even given a choice. You now often get an AI-generated summary *before* seeing any links. You may have to dig to find those links. That default shift uses more electricity and water—so we have to ask questions about sustainability.

I typed into Google, "How sustainable is AI?" and the answer was simply that it is sustainable. That feels a bit misleading.

Yes, and there are similarly worrying results from Chinese AI. Ask about Tiananmen Square in 1989, and you may get a limited—or no—answer.

That could suggest some level of censorship, especially where corporate or political interests are involved. I'm not claiming that's definitely the case, but remember, AI is based on the training data it's given. It's just a predictive model—a massive set of probability calculations based on data sources you don't know.

You either accept its answer or not, but that's the deal we're making with AI. I want to raise the question: is this the right deal?

Some uses of AI are obviously valuable. Take radiology in the NHS—we're short of staff. AI can be used to scan X-rays and highlight where a human radiologist should focus their attention. That's a good use: socially useful and where the energy cost is justified.

But then there are less necessary uses—like generating trivia—that consume six times more electricity than other ways of generating them. The sustainability calculation is completely different.

Could AI and data centres be used to generate misinformation about their environmental benefits?

Yes, they *could* be used in that way. It's possible to tweak algorithms to de-emphasise certain results or amplify others.

I'm not saying that OpenAI or Microsoft are doing this—it would be extremely crude. I'm not making that claim. But political authorities might think differently.

The real issue is that AI can only reflect the data it's trained on. If we're not having an honest debate about AI's environmental costs, then it's no surprise that AI doesn't raise those concerns in its answers.

AI isn't going to correct our misconceptions—we still need to rely on human judgement to frame the right questions and values. If we want a proper conversation about AI sustainability, we have to lead it ourselves—not expect AI to do it for us.

What do you think of the UK government's AI strategy?

I'm sorry to say I don't think it's adequate. It certainly recognises some major benefits, such as potential improvements in NHS efficiency, which are clearly valuable.

But it assumes too easily that AI is just as helpful in all contexts—like classrooms. At the moment, the industry is pushing that idea. OpenAI, for instance, encourages children to use ChatGPT to prepare schoolwork—why? Because they hope eventually to profit from it.

They also claim teachers will save time. Sometimes, that might be true. But let's be clear: this is a cost-cutting measure. And in the process, we risk under-skilling ourselves—losing the habit of planning good lessons or writing good essays.

After all, how did any of us learn to write a decent essay except by writing a few bad ones first?

Do you think data centres are inevitably part of our future, or are there alternatives?

Data centres are definitely here to stay. We're collecting more data than humans can analyse. And we need that data to manage complex challenges—violence, pollution, pandemics, urban development.

But the question is scale.

In just the past few years, the scale of growth has been astonishing. No one planned for AI to use such a high proportion of national electricity. That emerged only recently as systems became more sophisticated and demanded more computational power.

It seemed fine—until the red lights started flashing on policy dashboards. And we realised: we have a problem.

We need to pause and have the debate now. There is a geopolitical race—between the US and China especially—but that shouldn't dictate how we manage the risks and benefits of AI. Citizens, societies, and the environment should come first.

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