

## Transcript

### Comparing COVID-19 with our climate emergency

*Professor of Earth System Science, Prof. Neil Edwards, talks to ecologist Dr Julia Cooke about the connections and contrasts between the COVID-19 pandemic and our climate emergency, and their impacts on society and the economy.*

**JULIA COOKE:** In Greta's recent programme in which she aimed to document a year to change the world with a focus on climate change her plans were altered by the COVID-19 crisis. I'm joined by Professor Neil Edwards, who was an academic adviser on this BBC co-production. The series touches on how climate change and the pandemic are connected and interact. Neil, what do you think are the parallels?

**NEIL EDWARDS:** Well, I think there's really three interesting connections between the COVID-19 crisis and the climate crisis. The first is that the COVID-19 crisis really demonstrated what we can do if we really put major funding behind the science and really treat it as an emergency. I think the second thing is that it's created this window of opportunity to actually really act now in a way that we haven't acted before. And the third thing is a parallel between the two events, which is that both have this massive impact on the economy.

**JULIA COOKE:** So COVID stopped a whole lot of activity, including a lot of economic activity. How will climate change affect the economy?

**NEIL EDWARDS:** That's right. Well, the climate has a slightly different impact on the economy. The first thing is that there are risks of very costly climate impacts, and that's the kind of thing we hear loads about in the media, particularly flooding. Flooding is a really big one for actual economic damage, and that can be coastal flooding, inland flooding, from more frequent storms, et cetera.

But also a lot of other kinds of costly impacts on our food system, for instance, critical ecosystems possibly even triggering disease and pandemics. So there are those costly risks. There's also a huge transition involved, a transition to a different sustainable lifestyle to avoid that damage. And that does involve a massive change, in that transition itself involves economic risks, which are actually an equal magnitude, and those are related to changes in the economy.

**JULIA COOKE:** So what are the transition risks, and why does a transition pose a risk?

**NEIL EDWARDS:** Well, that's a good question. That transition involves massive changes in technology and energy, transport, manufacturing, steel, household devices, and everything. And it's all about making this big transition from a fossil-driven system, a fossil-driven economic system, to a sustainable energy - a so-called green, a green economy driven by renewable energy.

And that transition is driven by policy, government policies, but also by consumer preferences. That's really important, what we buy, and also by the ongoing process of technological change. So why is that a risk? Well, that's to do with all the assets that are involved in the old economy.

So fossil fuel assets, think of refineries and drilling rigs, and so forth. But also just the oil, becomes so-called stranded assets that we can no longer use and the value of all those stranded assets, that's something we've worked on here at the OU. Now that's been valued at possibly globally up to \$10 trillion. So that's a lot of potentially stranded assets.

**JULIA COOKE:** Incredible. But there have been other revolutions associated with developments in technology and associated with economic change. What can we learn from those?

**NEIL EDWARDS:** Well, surprisingly little actually. There, as you say, there have been transitions to-- the rail was a classic one. That involved a huge economic bubble, but also a transition to cars, as you say so. The funny thing is there's two-- there's two issues we have to disentangle here. So there's risks related to the decline of the old industries, but there's also risks related to the rising of the new industries.

So what we've seen and what we're familiar with if you go to the literature, there's been quite a lot of analysis of the risks of a growing bubble in which investors put loads of long-term bets in the growth of the new industry. And there's over-excitement and that bubble eventually bursts. But unfortunately, we're nowhere near that state yet. There's not enough money in the green new technologies. And the risks we're looking at in terms of this transition—they're still risks that are related to the decline of the old industries. So those two things are separate.

**JULIA COOKE:** And would a climate-induced financial crisis be like a rerun of the pandemic crisis?

**NEIL EDWARDS:** Well, no. They're actually very different, and the critical thing is that the time scales are very different. So we've heard about how the pandemic crisis could be now potentially the deepest economic recession in 300 years.

But that doesn't mean it's the worst because it should be over very quickly. We have a vaccine now. We're rapidly-- we hope moving towards a recovery, so there's not the kind-- same kind of permanent damage. There's not-- permanent change in the structure of the economy, and that's the kind thing that we expect to see, that we need to see in the climate crisis, so it's a very different kind of change.

There's no vaccine for the climate crisis, the change that we need for that. But at the same time, we pretty much know the solution. We've known for decades what we have to do. And indeed, there may not actually be a crash depending on how well it's managed, but we need to make that long-term transition.

**JULIA COOKE:** And so how do the two interact? Are there opportunities that are coming from the pandemic that can feed into mitigating climate change?

**NEIL EDWARDS:** Yes, they do interact, and there are opportunities. And the opportunity basically is that both of these things involve damage, destruction to the economy. And there's a recession, and then there's a recovery.

And that recovery is boosted by, as we've seen in the pandemic, huge injection of borrowed money from the-- from governments to boost the recovery. And obviously, if you're going to do that kind of destruction and recovery processes, it makes a lot more sense to do that once rather than do it twice. So hopefully, you invest in a green recovery from the pandemic, and then you're already on the road to the transition that you want to make from the climate crisis.

**JULIA COOKE:** So governments are touting big plans about green recoveries. Why aren't they making more of this, and what can we be doing to capitalise on this opportunity?

**NEIL EDWARDS:** That's a good question. There's a lot of talk about it, but yeah. As you might suspect, we're not-- there's not-- words don't always match actions, and the investment in the green recovery is not all the politicians would like you to think. And the reason for that is there is, again, a time scale problem.

So what you need for a quick recovery from a pandemic is certainly so-called shovel-ready solutions, things that you can throw money at immediately that are ready to go and get people working again. But of course, when you're building up a whole new green economy, those technologies, those industries, they're just not there yet.

So it's very difficult to suddenly create a whole new green economy immediately so that you can just pour money into it. So that's the problem really, behind technologies there are people, and there are jobs.

And that's the real problem like we saw with closing down the coal mines in the '80s, and that would be reflected-- should be reflected now across the whole world. But what do the coal miners do? You have to somehow be able to build up new industries for those people to be employed.

**JULIA COOKE:** So it sounds like there's lots of possibilities even if they're not easy. Should we be hopeful?

**NEIL EDWARDS:** Well, we should always be hopeful. And indeed, I think one of the things to be most hopeful about is the fact that we've made so much progress already. There's been massive technological change.

A huge amount of progress has already been made, and we're certainly not on the same trajectory that we were even a few years ago. And for instance, the energy system is the biggest user of polluting fossil energy. It's already at a tipping point in almost all of the world.

It's actually already cheaper to produce energy in a renewable way than to use fossil-based energy. Transport as well, with electric vehicles, is already close to that tipping point too. But all the same, it's a massive, massive ask. It's a huge change, and to make it happen, and to make it-- to keep it in the bounds that we need to keep it to protect the environment and indeed to actually deliver the solutions that everyone is committed to really needs everybody to get behind that and it needs policymakers and consumers that drive that transition. Everybody has to get behind it, and everybody has to do their bit.

**JULIA COOKE:** I think the programme outlines that really well, and you've expanded on that in this interview. Thank you very much for your time, Neil.

**NEIL EDWARDS:** Thank you, Julia.