

The effect of Coronavirus on the environment - and implications for UK policy

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Chair: The Rt Hon. the Lord Willetts FRS
Chair, The Foundation for Science and Technology

Speakers: Professor Rob Jackson
Chair, Global Carbon Project and Douglas Provostial Professor of Energy and the Environment, Stanford University
Dr Kimberly Nicholas
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Dr Stephanie Wray
Managing Director, RSK Biocensus and Former President, Chartered Institute of Ecology and Environmental Management
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Professor Gideon Henderson
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Audio/Video Files: www.foundation.org.uk

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PROFESSOR ROB JACKSON introduced the work of the Global Carbon Project, including the development of global budgets for the three dominant greenhouse gases. He also reminded the audience that average global temperatures had already risen 1.1 °C, that the last five years were the warmest in record and that global hunger and food insecurity were on the rise.

He showed data that consumption of fossil fuels was growing, even though there was a significant increase in renewables – this was because globally there was an ever increasing demand for energy. The planet had about 10 years left before using all the carbon in the budget to remain below 1.5 degrees of warming.

Globally, the Covid pandemic had led to a decline in emissions of about one sixth, and one third in the USA. But this decline was clearly not a sustainable way to cut emissions, and rates were beginning to go up again. The question was how to make emissions reductions permanent. In the USA, that might include freeing up low interest loans, changing the HEROES bill currently in the Senate

to include investment and production tax credits for wind and solar, and providing comprehensive job retraining for people in the coal and fossil fuel industries. In the UK, the Committee on Climate Change had proposed a number of principles for post-Covid "resilient recovery" in the U.K., including using climate investments to support economic recovery and jobs, embedding fairness as a core principle, and ensuring the recovery does not 'lock-in' greenhouse gas emissions or increased climate risk.

DR KIMBERLY NICHOLAS started with the five things that everyone should know about climate change – the world is warming; it's because of us; we're sure; it's bad; and we can fix it. She noted the IPCC report that impacts would be much worse if we don't make the 1.5 °C target, and it was urgent to reduce emissions. We needed to cut emissions by 7.6% each year, cutting them in half by 2030, and we needed to do so in a way that was fair and equitable. This would mean stopping all emissions of carbon to the atmosphere, not just replacing fossil fuels

with clean energy for power generation but then electrifying everything (e.g. transport). Big changes were also needed in agriculture, which contributed one quarter of all emissions. Covid provided an opportunity to stop investing money to do harm – more than 6% of global GDP is currently used to subsidise fossil fuels. We needed to stop building new infrastructure for fossil fuel technologies and shut down some fossil fuel infrastructure before its end of life. Financial incentives needed to shift to doing good – which can't be a return to business as usual. As well as changing incentive structures, we needed to introduce new regulations and standards, encourage small scale, locally-based transitions, reduce car use in cities and plan to reduce overall demand for aviation.

DR STEPHANIE WRAY started by noting that if we wanted to protect biodiversity, getting back to business as usual was the last thing we needed. 2019 had been supposed to be a major year for global biodiversity, with several international meetings to prepare the launch of a decade of restoration of biodiversity. These had been postponed due to Covid. But it was not too late; what was needed was transformative change, steering away from the paradigm of economic growth.

The global lockdown had led to some benefits to biodiversity. These had included certain species (marine, freshwater and terrestrial) thriving due to reduced direct, noise and light disturbance. Some wild flowers were increasing due to reduced intervention. Habitats were benefiting from better air quality, and there had been the biggest ever fall in carbon emissions. The lockdown had also shown people appreciating nature more.

However, the lockdown had also meant a reduction in essential management of some sites, and an increase in illegal logging and poaching. It had also led to increased fly tipping, more food waste, and a lack of access to land for survey and monitoring.

The question was, how can we use what we had learnt during the lockdown to better understand environmental sustainability? Covid had shown that people will change their behaviour for the sake of their family, and there were lessons from the communications of the Covid pandemic that may be useful. Governments should appoint Chief Ecologists, and test all policy decisions for their effect on nature. International policy on climate change and biodiversity should be combined through the different UN COPs, and a greater percentage of the land and sea area should be under conservation measures.

The overall message was that we need to rethink the economic system as if the environment mattered.

PETER BETTS began by noting that the 2015 Paris COP involved a negotiated treaty, plus Nationally Determined Contributions (NDCs) from different countries. These NDCs are due to be reviewed and levels of action increased every 5 years, and the Glasgow COP is the first of these review periods.

The current NDCs deliver about one third of the reductions needed to keep within a 2°C increase. To get on track for 2°C, countries would need to reduce emissions by 15 Gt (Giga tonnes of carbon) by 2030, 25% of current levels. To be on track for 1.5°C, the reduction needed is 30 Gt, 50% of current levels. Peter Betts' personal assessment of the politics is that the best which might be achieved in Glasgow is a reduction of 5-6Gt.

Even before Covid, the geopolitics had been significantly worse than in 2015 and climate had not been on leaders' minds. The strategy for the UK Government as Chair of the Glasgow COP, pre-Covid, had probably been a mixture of seeking the most ambitious increases as possible to NDCs, securing real economy announcements in parallel, and driving an overall narrative that the real economy is ahead of NDCs and that climate action is inevitable and irreversible.

The Covid crisis had meant that all countries were focussing almost exclusively on the pandemic. Many were introducing fiscal stimuli to restart economies, and there was an opportunity to make these climate smart. It was possible that Covid might lead to broader behavioural change, such as the public travelling less. Geopolitics had been further strained by the Covid crisis, and the COP has been deferred by a year.

For the UK as COP chair, the broad objectives were unchanged. In the short term, the objectives were to secure a new COP timetable and promote green fiscal stimulus packages. The position of the US would be different depending on the Presidential election – if Mr Biden is successful, the US may take more of a global lead; if it is Mr Trump, the UK may work with the EU to try and develop an EU/China moment. In all cases, expectations of the UK would be very high, and the UK will need to raise its own NDC targets, and use significant political and diplomatic capital to secure a final deal.

PROFESSOR GIDEON HENDERSON began by noting some changes seen by the Covid lockdown. As well as major reductions in greenhouse gases, the lockdown had led to significant improvements in air quality, with significant reductions in nitrous oxides. However, levels of fine particulate matter (PM2.5) had not significantly changed, and it was not clear why. The UK Department of Transport was looking to learn about the links between reduced traffic and air quality.

The Covid crisis had exposed links between environment and health. For example, the chances of dying of Covid-19 were related to the air quality in the area in which you lived, as poor air quality led to a number of the underlying health conditions that put people at greater risk. Degradation of the environment also increased the risk of zoonosis, as did a warmer climate, particularly for vector borne diseases such as Zika and West Nile Disease. On the other hand, the lockdown had also shown a positive link between health (both physical and mental) and access to the environment, and this could be a policy driver for the future, for example in relation to urban green spaces.

Covid had also focussed attention on food security. Would this be a driver to an increase in food grown nationally? And if it does, would this mean land use pressure, or could the grow food more efficiently?

The UK Government wanted to learn from the Covid pandemic, and have a green renewal – not go back to “business as usual”.

IN THE DISCUSSION PERIOD, the speakers discussed whether we could learn lessons in terms of communications and behavioural change from the global emergency of the Covid pandemic for future action and public communications on climate. The panel noted that the pandemic had led to significant behavioural change, and evidence suggested that some of this may be “sticky” and last beyond the pandemic, although behavioural change itself was not enough, it needed to be combined with governmental action. It was also important to realise that different countries were in different positions - some developing countries will want to see more aircraft flying. One opportunity came from the fact that a global emergency such as a pandemic had seemed very distant to people – now that they had seen that such an emergency was possible with Covid, they may engage more with thinking of the environment in the same way. It was possible that the public’s view of the importance of science had been enhanced by the crisis, which may help in communicating what the science says is needed to tackle climate change.

Overall the panel were optimistic that the Covid crisis would be provide a stimulus for a green recovery, and that climate change would be tackled at least in the medium term, but this needed to be tackled internationally. We didn’t just need optimism, however, we needed action. In some places where national governments were not acting, subnational authorities were.

Discussing how both individual institutions and governments could make some of the behavioural changes of lockdown stick, the panel noted that there was not a binary choice between lockdown and business as usual. We

needed to question the assumption that flying will steadily increase, and in some countries such as Sweden there had been a cultural move away from flying. For universities, flying was often the largest source of emissions, and scientific conferences were the largest reason why university staff fly. Conferences had gone online in 2020 because of Covid, and if that could be continued, a significant reduction in the emissions of universities may be possible.

The panel discussed whether the lack of global co-ordination in the Covid crisis had parallels for tackling climate change. It was agreed that global co-ordination would have been better for Covid, a role which in the past might have been provided by the USA, though it was still possible for some co-ordination in fiscal stimulus action. In some ways, countries could tackle Covid separately – but that was not possible with climate. Unlike Covid, climate action did have a global process; the question was whether it was strong enough to tackle the problem.

Reuse and recycling were discussed, with the example of disposal PPE and the issue of its supply during Covid as an example. We could move towards a circular economy, but the right incentives needed to be put in place.

Finally the panel debated whether democratic governments could ever take such draconian measures for climate as they had for tackling Covid. They agreed that democracies really needed to step up and take action before such draconian steps were needed. This would be much cheaper and easier. Democracies can interfere with the capitalist system to promote the changes they want, and if the right incentives were put in place, people and companies can make a lot of money by driving technologies and activities in the right direction.

Gavin Costigan