The (Largely) Unspoken Connections Between Climate Change and Coronavirus



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Before COVID-19 abruptly invaded our lives earlier this year, it felt like things were looking up in the climate change movement. 2019 saw <u>Extinction Rebellion</u> shutting down central London to raise awareness of the climate crisis, young people rising up with <u>school strikes</u> taking place all over the world (and <u>Greta Thunberg</u> becoming a household name), and the UN holding a series of influential climate change conferences — including the first UN climate summit for young people. It felt like we were riding a wave of real momentum, and that political shifts were on the horizon.

Now, our thoughts, conversations, news channels, are all focused on coronavirus. It seems the world has gone quiet on climate change. And that's fully understandable — the virus was unexpected and has changed the lives of pretty much all of us in some way, knocking us <u>out of</u> <u>our normal routines</u> into this strange new world of facemasks, isolation, and uncertainty. So, of course, we want to talk about it, and, of course, it eclipses all else.

But what we aren't talking about so much are the connections between COVID-19 and climate change, and how this virus fits into the wider context of the climate emergency that we find ourselves living through.

Our broken food system



Photo by <u>Damla Özkan</u> on <u>Unsplash</u>

One of the first issues that coronavirus brought to light was our broken food system. The very beginning of social distancing measures saw mass panic buying, with supermarket shelves emptying overnight as the public (or, at least, the wealthy ones) stocked their shelves for the long haul.

We've become so used to supermarkets always being stocked with an abundance of food. But this time, the shelves stayed empty.

Why? Because our supermarkets are highly centralised, relying on very few farmers and growers to supply all their stock, instead of the food supply infrastructure of old which saw many local family farms, small dairies, butchers, and retail outlets existing in tandem. The food these few suppliers produce is processed and distributed from huge warehouses, working on a 'just-in-time' model, wherein little stock is held in storage — rather it is received from suppliers as and when stock on the shelves is diminishing.

When demand massively increased and shelves were completely emptied, the vulnerabilities of this centralised and just-in-time system were brought to light. The <u>Food and Agricultural</u> <u>Organisation's (FAO) report on food supply</u> <u>during COVID-19</u> highlights this, finding that there had been no significant changes to food production and that issues with the supply chain to consumers have been down to logistical strains — whilst also suggesting that we may see the supply chain disrupted globally soon.

This brings to light a further issue with our food system. In Britain we rely on producers from across the world to supply us with produce which cannot be grown in the UK, or isn't in season. We now expect to see mangoes, grown only in tropical regions, on our UK shelves. We expect to see strawberries in winter when they can only be harvested in the UK in the summer months. As of 2016, 50% of the food eaten in the UK is imported (30% from the EU, 20% from non-EU countries) — that represents a lot of carbon emissions from transport, but it also represents an issue for our food security. With many borders closed, we have to go back to a more local and seasonal way of eating.

What can we do about this?

We need to make sure our supply of food can be maintained even in times of crisis as we find ourselves in right now. This means increasing UK production and encouraging people to eat foods grown in the UK. It means challenging the centralisation of our food system and encouraging more smaller producers of food in the system.

For us, as consumers, we should be trying to get as much of our food as we can locally. For British-grown grains and pulses, there are <u>Hodmedods</u> in Sussex. If there's a deli down the road from you who are stocking local produce, or a nearby farm selling veg boxes, now's the time to consider swapping to them.

The deadly role of air pollution



Photo by Holger Link on Unsplash

More and more studies are being released which suggests that air pollution has had a deadly role to play during COVID-19.

One such <u>study has looked at levels of nitrogen</u> <u>dioxide as a contributing factor to fatalities from</u> <u>contracting coronavirus</u>. Nitrogen dioxide is an important air pollutant, contributing to the formation of photochemical smog, which inflames the lining of the human lungs and makes us more susceptible to respiratory diseases. The analysis of fatalities found that of all the deaths across 66 regions of Italy, Spain, France, and Germany, 78% of them occurred in just 5 regions. These 5 regions are the most polluted ones.

"The results indicate that long-term exposure to this pollutant may be one of the most important contributors to fatality caused by the Covid-19 virus in these regions and maybe across the whole world. Poisoning our environment means poisoning our own body, and when it experiences chronic respiratory stress its ability to defend itself from infections is limited."

- Yaron Ogen, lead researcher

In most major cities and urban areas across the world nitrogen dioxide levels are higher than they should be, and have been for some time, without us doing much about it. There's irony in the fact that the self-isolation measures brought in due to COVID-19 are actually showing us how possible it is to drastically improve our air quality, which would increase our tolerance to the virus.

Air pollution is measured through air quality index (AQI) levels, with anything above 25 seen as unsafe. In Delhi, India, AQI levels usually reach 200, and during peak pollution periods in 2019 they reached an enormous 900. But when self-isolation brought cars off the roads and stopped manufacturing industries, the city has seen AQI levels regularly fall below 20. You can see photos showing the incredible contrast from smog to clear, blue skies in <u>this Guardian article</u>.

"The blissful sight of blue skies and the joy of breathing clean air provides just the contrast to illustrate what we are doing to ourselves the rest of the time."

- Dr Shashi Tharoor, politician and author

What can we do to reduce air pollution?

About 80% of the nitrogen dioxide in our cities comes from vehicle exhausts. So, what we can do about it is actually pretty simple. Walk and cycle as much as you can in your local areas, take public transport for longer distances, and use cars only when absolutely necessary.

It's also worth noting that in the UK an important policy is the introduction of Clear Air Zones or Zero Emissions Zones which several cities have committed to introducing, meaning that private vehicles are no longer allowed in city centres. However, the introduction of these Zones now seems likely to be <u>postponed</u> due to COVID-19. So, if you feel strongly that these Zones should be implemented, it's also worth writing to your local MPs and councillors to encourage them to prioritise their implementation.

Could this be just the beginning of viruses?



Photo by <u>Natalie Ng</u> on <u>Unsplash</u>

It's widely believed that COVID-19 can be traced to Huanan Seafood Market in Wuhan China. This Market is what's known as a 'wet market', a market with a myriad of stalls selling fish, meat, and wild animals which are slaughtered on the premises to be as 'fresh' as possible for customers.

This environment, where several different species are in close confinement and the possibility of their bodily fluids becoming mixed is highly likely, is the perfect place for a virus to mutate and to jump across species, in this case entering humans.

It might seem like a one in a million chance that this would happen, and that it would cause a pandemic across humans. However, it's likely that virus' such as COVID-19 will only get more and more frequent.

We are seeing the discovery of <u>increasing</u> <u>numbers of new viruses in animals which have</u> <u>been created as a result of human infringement</u> <u>on the natural world</u>, bringing species together who would not normally come close in the natural world — just like Asia's wet markets.

Climate change is going to worsen this.

We are already seeing global warming having an impact on wildlife. Changing climates and habitat loss are meaning that wildlife is being displaced, moving to new places, and coming in closer contact with other species and with humans, increasing the likelihood of virus outbreaks.

We've already seen examples of this happening. The 1998–9 Nipah virus outbreak killed over 100 people in Malaysia. Researchers found that it had been caused by fruit bats who began to feed on fruit trees grown on the same farms and pigs who were eaten by humans. The fruit bats had been dislodged from their usual habitat and feeding spots by forest fires and an El Niño-related drought.

Research is also coming to light which suggests that warmer conditions caused by climate change are causing some pathogens to adapt. If pathogens can adapt to living in warmer conditions, this means they're more likely to survive and thrive in the warm, human body.

Only last year, in 2019, human infections caused by fungal species Candida Auris arose on three different continents, all of which had seen temperature increases. <u>Researchers concluded</u> that the fungus was adapting to warmer temperatures.

"You could lose your heat defense if the microbes learn to grow at higher temperatures. That is a different level of threat that, up until now, has not been part of the story." — Arturo Casadevall, lead researcher

Add to this the fact that researchers recently announced they had found 33 viruses within a melting glacier in Tibet which had been entombed in ice for over 15,000 years — and that 28 of these viruses had never been seen before by scientists. Ice melt could release these pathogens into the environment.

What can we do about this?

In the short term, make sure you're doing all you can to boost your immune system. That means eating well, exercising, reducing stress, and getting enough sleep.

With the bigger picture in mind, to reduce the likelihood of this scenario arising we need to do all we can to prevent global warming worsening. Do your bit for the climate in your own life by reducing the amount of meat and dairy you eat, travelling by foot, bike, or public transport, reducing your energy use, divesting from fossil fuel companies and investing in companies who are doing good. Keep talking about climate change, and keep fighting for rapid political action to reduce our carbon emissions and keep our temperatures stable.

We need to start connecting the dots

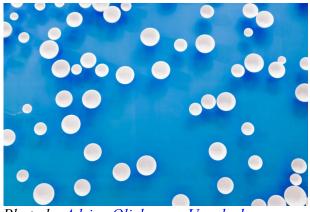


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Over the past few months, COVID-19 has taken over our news, our social media feeds, our conversations — our lives. And yet, there has been so little conversation and coverage about how the virus relates to the bigger picture of our changing world.

If the news reported on the crisis of climate change in the same way as it has on coronavirus, with daily reports of the numbers of fatalities and people affected, would things be different? Would politicians be forced to act to mitigate the situation overnight, in the same way they have with coronavirus?

We need to start connecting the dots.

Coronavirus and being forced to stay home, have cut our emissions quicker than years and years of negotiations and campaigning. We must not let them spike again when things return to 'normal' — our new challenge is to get people to understand how the virus links with the climate crisis, and the importance of harnessing and continuing this downward trend. In this way, maybe some good can come out of COVID-19.