

Climate Change Scholarship - What climate change means to me – By Josie Chaplin

As a more mature student, I was a teenager in the late 1980s when I first heard about global warming, as it was called back then. We were aware of the hole in the ozone layer that had been discovered in 1985 above the Antarctic and were starting to make changes to stop it getting bigger. The ozone layer protects us from harmful UV-B ultraviolet rays which cause skin cancer and cataracts in humans as well as damaging plants and animals.

We were warned about the problems with chlorofluorocarbons (CFCs) in aerosols (hairspray and other aerosol cans) and refrigerators back then, and I remember a lot of publicity and campaigning for changes to the way that aerosols and fridges were made. I had a global warming t shirt that I think I bought in about 1988 or 1989 and I remember watching a big rock concert on TV that raised awareness.

Looking back, I am so pleased that this campaigning worked as a single CFC molecule can apparently destroy 100,000 ozone molecules and lasts for between 20 and 100 years in the atmosphere. I used to use a lot of hairspray as a teenager but don't any more, and it's shocking to me to discover that some of the molecules from my hairspray are probably still up there somewhere in our atmosphere. While the Montreal Protocol was ratified in 1987 and we have stopped using CFCs, we are now dealing with the effects of their replacement, hydrofluorocarbons (HFCs). HFCs don't actually deplete ozone but they are still potent greenhouses gases and are contributing to the warming on Earth.

If the Montreal Protocol hadn't been agreed and signed in 1987 we could have been facing an additional 2.5 degrees Celsius of global warming by the end of the century, with the ozone layer breaking down by the late 2040s, about 25 years away. I will be a pensioner then (same age as my parents are now) and probably a grandparent so I am relieved that this change has taken place, although we are still looking at 1.5 degrees increase which will still bring us problems.

We are already seeing the impacts of climate change with hotter summers and drier winters. I was so shocked that Fife experienced temperatures of 30 degrees Celsius this summer. I was aware of news reports a couple of years ago that suggested it could happen in the future, but not that it would happen so soon. When I was about 7 or 8 we had some very snowy winters and our local canal froze and we would walk on it (with an adult and only near the very edge). This was in England south of London, I don't think it has frozen there since. I love looking at old photos and videos of people skating on canals and rivers in places like the Netherlands and up here, but this hardly ever happens now which is another effect of climate change. However, driving through the south of England in July on our way back up to Scotland from France, I was really struck by the lack of green

fields as they were all yellow or brown. It felt as though we were in Spain and not Britain. I'm not comfortable thinking that this would continue and become the new norm or get worse.

Also, the problems faced by Australia in the last decade with floods in and around Brisbane as well as lots of wild fires globally and the glaciers and artic caps melting are all other signs of climate change which upset me. Regular reports on the news about areas that are burnt down across the world with wildfires and the devastation of the amazon rain forests also worries me as this is contributing towards climate change.

There have been a lot of awareness with eco activists including extinction Rebellion and Just Stop Oil organising protests and stopping traffic in an attempt to get people to stop and think about climate change and the effects of relying on fossil fuels in bigger cities like London. I think it is a shame that their members have been arrested, but as their protests may have broken the law they have to take the consequences of it. In some ways it may be turning people away from taking a stand with them, as they have inconvenienced them by stopping them from driving to work, and that includes those people who have already changed from fossil fuels to electric cars. I'm pleased that Greta Thunberg has highlighted the issue in a way that young people have engaged with so that they can remind their parents and older family members and it's not just people my age who nag their families to sort and recycle the rubbish, try to reduce the amount of single use plastics we use and look at renewable energy sources.

Our reliance on fossil fuels to provide our energy (electricity and gas) has decreased with the introduction of solar and wind power and new homes being built with better insulation. Personally I have increased the level of insulation in my loft this winter, and looked into replacing my gas boiler with an air source heat pump, but the cost for us was just too much, and I kept being told negative stories about how they work and if they work in a power cut. I would like to get solar panels on the roof of my house as it is south facing, although again that will have to wait a couple of years until I can afford them. My energy supplier is Octopus who rely on solar and wind farms to provide electricity and are trying to balance out our use of gas with carbon reduction projects around the world.

My next car will hopefully be an electric car which will reduce my emissions, and I would like to be in a position to power it with solar panels, bringing its usage cost down as well as reducing my carbon footprint.

I try to avoid single use plastics as their production is wasteful and they are filling up landfill. It is better when we don't have the option of buying single use plastics, and as the "eco-friendly" option is often more expensive than the standard option it should be the manufacturers who should be forced to make these changes so it is easier for the consumer. I no longer buy wipes or cotton buds and I buy toilet roll from 'Who Gives a Crap' as it comes wrapped in paper and in a big cardboard box. We recycle as much as we can in our house and I have always been one for what is now known as eco-fashion, buying from charity shops and second hand from eBay, Vinted etc. As my children remind me every now and again, we need the planet to survive for them and their children.

I am taking the course Advanced Certificate: Computing with Software Development and Cyber Security SCQF Level 6 this year at Fife College. In the Intermediate level 5 course last year we were encouraged to consider the effects on climate change and in particular the carbon footprint during the manufacture and use of a product. We also thought about the scarcity of some of the metals that are used in the production of computing parts as well as risks from hazardous material when disposing of old computer equipment, the use of plastic in packaging, the power rating of devices and how fast they can charge up therefore using less power, as well as recycling the materials that are used to make them and making sure that devices are energy efficient.

Whilst I have been writing about climate change I have re-awakened my interest in climate change and how to stop it becoming more of a problem. Thank you for making me think more and take action.