Humanist Climate Action Presentation for SE London Humanists
7th October 2021

1. Introduction slide.
2. For the one planet we have.
   I'm going to talk to you today about Humanist Climate Action, who we are, why this matters now, and what we are doing.
3. There's no planet B.
   I am not here to try to convince you about the existence of climate change, and the threat we face as inhabitants of this earth. Because the argument is already won.
   BUT it might be worth recapping on the five crucial measures of the climate's health.
4. CO2
   Record levels in 2020, hitting 417 million in May this year.
   The last time CO2 levels exceeded 400 parts per million was around 4 million years ago during the Pliocene era, when global temperatures were 2-4C warmer and sea levels were 10-25 metres (33-82 feet) higher than they are now.
   *"We are seeing record levels every year," s*ays Ralph Keeling, head of the CO2 programme at the Scripps Institution of Oceanography, which has been tracking CO2 concentrations from the Mauna Loa observatory in Hawaii since 1958. *"We saw record levels again this year despite Covid."*
   The effect of lockdowns on concentrations of CO2 in the atmosphere was so small that it registers as a blip (according to the World Meteorological Organization), and has had a negligible impact on the overall curve of rising CO2 levels.
   "We have put 100ppm of CO2 in the atmosphere in the last 60 years," says Martin Siegert, co-director of the Grantham Institute for climate change and the environment at Imperial College London.
   100 times faster than previous natural increases, such as those that occurred towards the end of the last ice age more than 10,000 years ago.
   "If we keep tracking the worst-case scenario, by the end of this

century levels of CO2 will be 800ppm. We haven't had that for 55 million years. There was no ice on the planet then and it was 12C warmer," says Siegert.

5. picture
6. Record Heat

   Past decade hottest on record.
   The year 2020 was more than 1.2C hotter than the average year in the 19th Century.
   Record temperatures usually coincide with El Nino event (large band of warm water in the Pacific) like 2016, but 2020 had El Nina (the reverse) and still hottest temperatures; which means it would have been worse if it hadn't.
   Hot temperatures led to wild fires in Colorado, California, Western Australia
7. picture

8. Arctic Ice

   Nowhere is that increase in heat more keenly felt than in the Arctic. In June 2020, the temp reached 38C in eastern Siberia, the hottest ever recorded within the Arctic Circle, a heatwave that accelerated the melting of sea ice and delayed the usual Arctic freeze by almost two months.
   The summer of 2020 saw sea ice area at its second lowest on record, and sea ice extent (a larger measure, which includes ocean areas where at least 15% ice appears) also at its second lowest.
   As well as being a symptom of climate change, the loss of ice is also a driver of it. Bright white sea ice plays an important role in reflecting heat from the Sun back out into space, a bit like a reflective jacket. But the Arctic is heating twice as quickly as the rest of the world – and as less ice makes it through the warm summer months, we lose its reflective protection. In its place, large areas of open dark water absorb more heat, fueling global warming further.
   The loss of ice is believed to be disrupting weather patterns around the world already. It is possible – though not yet conclusively shown – that 2018 Arctic conditions provoked the "Beast from the East"

winter storm in Europe in 2018 by altering the jet stream, a current of air high in the atmosphere.
Temperature difference between the equator and poles drives a lot of our large-scale weather systems, including the jet stream. And because the Arctic is warming faster than lower latitudes, there is a weakening of the jet stream.

9. picture
10. Permafrost
    Across the northern hemisphere, permafrost – the ground that remains frozen year-round for two or more years – is warming rapidly. When air temperatures reached 38C (100F) in Siberia in the summer of 2020, land temperatures in several parts of the Arctic Circle hit a record 45C (113F), accelerating the thawing of permafrost in the region. Both continuous permafrost (long, uninterrupted stretches of permafrost) and discontinuous (a more fragmented kind) are in decline.

    Permafrost contains a huge amount of greenhouse gases, including CO2 and methane, which are released into the atmosphere as it thaws. Soils in the permafrost region, which spans around 23 million square kilometres (8.9 million square miles) across Siberia, Greenland, Canada and the Arctic, hold twice as much carbon as the atmosphere does – almost 1,600 billion tonnes. Much of that carbon is stored in the form of methane, a potent greenhouse gas with a global warming impact 84 times higher than CO2.

    Permafrost is doing us a big favour by keeping that carbon locked away from the atmosphere.

    Thawing permafrost also damages existing infrastructure and destroys the livelihoods of the indigenous communities who rely on the frozen ground to move around and hunt. It is thought to have contributed to the collapse of a huge fuel tank in the Russian Arctic in May, which leaked 20,000 tonnes of diesel into a river.
11. picture

12. Forests
    Since 1990 the world has lost 178 million hectares of forest (690,000 square miles) – an area the size of Libya. Over the past three decades, the rate of deforestation has slowed but experts say it isn't fast enough, given the vital role forests play in curbing global warming. In 2015-20 the annual deforestation rate was 10 million hectares (39,000 square miles, or about the size of Iceland), compared to 12 million hectares (46,000 square miles) in the previous five years.

    Brazil, the Democratic Republic of the Congo and Indonesia are the countries losing forest cover most rapidly. In 2020, deforestation of the Amazon rainforest surged to a 12-year high.

    An estimated 45% of all carbon on land is stored in trees and forest soil. Soils globally contain more carbon than all plants and atmosphere put together. When forests are cut down or burned, the soil is disturbed and carbon dioxide is released.

    Allowing forests to regrow naturally and rewilding huge areas of land, a process known as natural regeneration, is the most cost-effective and productive way to capture CO2 and boost overall biodiversity.
13. Picture
14. The overwhelming scientific consensus suggests that we must establish and implement a clear pathway by 2030 to limit the rise in temperature to at most only 1.5°C above pre-industrial levels.
    Humanist Climate Action is a volunteer-led network of Humanists UK members and supporters committed to redefining lifestyles and campaigning for policies that promote low-carbon, ethical, and sustainable living in the light of the degeneration of the Earth’s climate and biodiversity. We are bringing humanists together to facilitate individual and collective action on these issues.
    Why do humanists and environmentalism go hand in hand?
    Clearly as humanists, we are guided by reason and science, and we also recognise a moral duty towards the

welfare of our fellow beings and the natural world.
Also, as humanists, we seek to engage in dialogue and debate rationally, intelligently, and with evidence, and promote the belief that humans are part of a wider natural world which must be treated sustainably for the sake of current and future generations.
Our belief in scientific facts.
Not looking to a higher spiritual power to solve our problems for us
Taking responsibility for our own lives, for the lives of others
Our belief that this is the one life we have, and similarly, the one planet we have
Therefore, we know that our finite human lives are given meaning and purpose by being part of an ongoing human community and the legacy we will give to future generations.

15. What are our aims?
    https://humanists.uk/humanist-climate-action/#do
16. And it's not all doom and gloom. There are incredible humans creating innovations and making positive changes.
17. Solar panels are being put up around the world. But what do you do when the sun stops shining? In China, humans have invented solar panels that can also capture energy from raindrops.
18. We all know plastic is a huge problem.

- Every day around **8 million pieces of plastic** make their way into our oceans.
- The Great Pacific Garbage Patch is around **1.6 million square kilometers** – bigger than Texas.
- The world produces **381 million tonnes** in plastic waste yearly – this is set to double by 2034.
- **50% of this is single-use** plastic & only **9% has ever been recycled.**
- **Over 2 million tonnes** of plastic packaging are used in the UK each year.
- **88% of the sea's surface** is polluted by plastic waste.
- **Between 8 to 14 million tonnes** enters our ocean every year.
- Britain contributes an estimated **1.7 million tonnes of plastic** annually.

Humans...scientists... in Japan have accidentally discovered a bacterium that can eat plastic. They found it eating plastic at a

waste dump in Japan in 2016, and have successfully altered an enzyme, which the bacterium produces, to make it even better at breaking down plastic.

19. But it's not all about scientists. Australian surfers Pete Ceglinski and Andrew Turton, got so fed up with seeing floating debris in their waves that they invented the Seabin, which features a submersible pump that continuously **sucks** water into the device, separating rubbish so it can be collected.
20. Of course, good ideas and innovations need funding to bring them to life, and also policy to make them happen. In the UK, the government has been keen to back wind energy. In fact, one of the massive offshore wind farms the government has been keen to promote, Hornsea One, is now the largest offshore wind farm in the world with an operational capacity of over 1.2GW. And in 2020, the government launched Build Back Greener, with the aim of making the UK the world leader in clean wind energy – creating jobs, slashing carbon emissions and boosting exports. £160 million was promised to upgrade ports and infrastructure across communities like in Teesside and Humber in Northern England, Scotland and Wales to hugely increase our offshore wind capacity, which is already the largest in the world and currently meets 10 per cent of our electricity demand.
21. So, what can we do?

    However, in an age when everybody is angry, and everybody is shouting at everyone, about everything, all the time, how do we expect to be heard?

    An apocalyptic perspective on the environment might be motivating when delivered in a speech by the great young Greta Thunberg when she is aiming at politicians and world leaders. But rather than empower everyday people, many will feel hopeless and unable to help.

    BUT we know, as humanists, that we can come together with shared purpose and values, regardless of religion, to create positive change. That we can act individually for everybody.
22. We might feel like we can't be heard, but if we come together, we can. As Al Gore, the US politician and environmentalist, who was the co-recipient of the 2007 Nobel Peace Prize with the Intergovernmental Panel on Climate Change, said:

    Humanist Climate Action has created a really quick way for people to write to their MPs, to write to the President of COP26 calling for an 80% reduction in CO_2 emissions by 2035 and a doubling of forest area by 2045.

23. And yes, we can also do our own bit. I'm going to share some ideas, but there are plenty more. I just want to say though; it's not about being perfect, or feeling guilty. There are ways we can eat sustainably, champion brands that are doing good, be informed, travel more responsibly, put any money we might have in ethical banks, reduce waste, and help our local wildlife areas.