

## **What risks are associated with climate change and what should we be doing about it?**

Climate change is the most pressing issue we face. It's not, as some climate change sceptics have argued, part of the earth's 'natural cycles', but a result of human activity and exploitation of the planet.

The UN defines climate change as 'long-term shifts in temperatures and weather patterns' of which 'human activities have been the main driver'. Humans contribute towards global warming and climate change through the release of greenhouse gases - carbon dioxide and methane are by-products of meat farming, deforestation, and energy production - in particular burning of fossil fuels. The Environmental Energy Institute found 80% of the world's power comes from fossil fuels. Release of these gases causes the greenhouse effect, whereby gases form a layer in the earth's atmosphere trapping solar radiation, warming the planet. Impacts of climate change are detrimental to the natural environment, and humanity. Risks to people and nature are innumerable, with natural disasters and extreme weather, increased prevalence of diseases and further health implications, and perhaps most significantly...enormous financial risks.

A key risk of climate change is increased severity and frequency of natural disasters, and extreme weather including floods, droughts, wildfires, heatwaves. Climate-related disasters have tripled in the last thirty years (Oxfam int.). In 2023, Canada saw its worst wildfire-season on record, releasing enormous carbon dioxide amounts, polluting air quality for millions. Greek tourist islands faced such severe wildfires that thousands of residents and tourists were evacuated, and an estimated 1megaton of carbon emissions released (World Meteorological Organization, 2023). Rising temperatures lead to dryer conditions, and more wildfires, resulting in more emissions release contributing towards the greenhouse effect (a positive climate-feedback loop). In Europe torrential rainfall resulted in unprecedented floods in 2021, 'leaving more than 150 dead' in Germany and Belgium (Hodgson, 2022). Bangladesh is particularly vulnerable to flooding, with the most recent floods of June 2022 affecting over 7.2m people (IFRC, 2022).

Another risk of climate change is around health and disease. In the 2007 Bangladesh floods, the diarrhoea epidemic affected almost 70,000. In 2022, more Europeans died due to heat than any other year recorded, reaching over 61,000 (Park, 2023). Temperature rises results in a wider geographical area and different seasonality of vector-borne diseases. Mosquitoes thrive in warm and humid climates as their preferred breeding environment. Climate change will see larger geographical areas experiencing mosquitoes, with longer mosquito seasons. This means significantly more people affected by malaria, including 'new populations who have little or no immunity.' Models predict potentially '260-320m more people could be affected by malaria by 2080' (Commonwealth Secretariat 2009), posing catastrophic impacts on the countries and healthcare systems affected.

There's also serious financial risks from extreme weather events and natural disasters, from recovery and rebuilding costs, to mitigation strategy costs. 'The costs of those events had gone up five times in a quarter of a century' (Carney, 2021). By the end of this century, coastal flooding alone, with a projected 50% rise, '[threatens] assets worth 20-25% of global GDP' (Pavid, 2021). Financial implications of climate change are staggering. 'The Bank of England has said up to \$20tn of assets could be wiped out if the climate emergency is not addressed effectively.' (Carrington, 2019). Globally, 'some estimates suggest that, over the balance of this century, climate change could cause the equivalent of a decade of no economic growth.' (Pavid, 2021).

Why has so little been done when climate change is so critical? It seems no-one is willing to incur the inevitable costs for reducing climate change, and with money arguably being the most influential driver in society, backing for costly climate policies is inevitably unpopular. But, with millions more



people having been directly impacted by climate change, support for tackling it has increased. To maximise this opportunity, policies and systems combining climate change mitigation and financial incentives should be created.

Decarbonisation is critical in tackling climate change as ‘the most important human-made contributor’ to the greenhouse effect is carbon dioxide (Cookson, 2022). Pricing carbon through carbon taxes or emissions trading are potential options, but these systems are extraordinarily complex. In the EU, unanimous agreement is needed before laws regarding carbon-taxing can be passed. Another approach can be seen with the Net-Zero Banking Alliance, which ‘currently represents over 40% of global banking assets, which are committed to aligning their lending and investment portfolios with net-zero emissions by 2050’ (United Nations, 2023). This system largely removes the complications of implementing a carbon-tax and emissions trading system, as it leaves technicalities to the discretion of each individual, business and organisation, providing only financial incentives for decarbonising, along with a platform through which social desirability of climate considerate practices direct financial investment. With this scheme in place, ‘US coal companies had already lost 90% of their value’ (Carney, 2021), it strongly encourages decarbonisation as it’s more financially beneficial for companies, as otherwise the value of their businesses will drop. Part of the decarbonisation process involves carbon offsets. The idea is that ‘the vast majority of offsets...flow to emerging and particularly developing economies... potentially on a scale of \$100bn+ a year for the parts of the world that need it most’ (Sheppard, 2022). This addresses another world issue, which climate change has polarised, namely socio-economic and developmental inequality. For less developed countries to partake in decarbonisation and halt their development, significant financial compensations are needed, and net-zero offsets is one efficient way of executing this.

Financial systems and climate change mitigation must be aligned to achieve the greatest possible advances, towards curbing the immense risks climate change poses. As money is the driving factor in decision-making, the most effective policies must involve an element of financial consideration and incentives. We’ve reached a tipping-point where climate action is socially desirable **and** the disastrous effects of climate change are being experienced first-hand. It’s crucial that people are fully educated about the impacts of climate change, and ways in which they can contribute towards addressing it, and end the common feeling that we’re all separate entities so our small individual contributions won’t make a difference.

---

## **Bibliography and References**

Carney, M (January 22 2021) – United Nations: Interview with Mark Carney: Investigating in net-zero climate solutions creates value and rewards

<https://www.un.org/en/climatechange/mark-carney-investing-net-zero-climate-solutions-creates-value-and-rewards>

Carrington, D (October 13 2019) – The Guardian: Firms ignoring climate crisis will go bankrupt, says Mark Carney

<https://www.theguardian.com/environment/2019/oct/13/firms-ignoring-climate-crisis-bankrupt-mark-carney-bank-england-governor#:~:text=The%20Guardian%20revealed%20last%20week,emergency%20is%20not%20addressed%20effectively.>

Cookson, C (March 19 2022) – The Financial Times: The race to curb global warming

<https://www.ft.com/content/7fb14f50-3308-47dd-8448-28499143d55e>



Chowdhury, R K (August 30 2017) – The Third Pole: Bangladesh eliminates post-flood disease deaths  
<https://www.thethirdpole.net/en/livelihoods/bangladesh-eliminates-post-flood-disease-deaths/#:~:text=Zahid%20Maleque%2C%20the%20state%20minister,cure%20diarrhoea%2C%20he%20said.>

Harford, T (March 19 2022) – The Financial Times: We must pay the cost of carbon if we are to cut it  
<https://www.ft.com/content/4c1a780b-3e05-4752-80b6-283589d56923>

Hawcock, N (April 20 2023) – The Financial Times: Europe's Climate Leaders 2023: interactive listing  
<https://www.ft.com/climate-leaders-europe-2023>

Hodgson, C (March 19, 2022) – The Financial Times: The rise of 'extreme weather attribution'  
<https://www.ft.com/content/fe51a803-7ece-4652-bce4-23ba7ed21a12>

International Red Cross and Red Crescent (28 June 2022) – IFRC: Millions in Bangladesh impacted by one of the worst floodings ever seen  
<https://www.ifrc.org/press-release/millions-bangladesh-impacted-one-worst-floodings-ever-seen>

McDougall, M (March 19 2022) – The Financial Times: How savings can help save the planet  
<https://www.ft.com/content/88d71e49-e558-4ad2-b030-ce18fe537995>

Monbiot, G (May 14 2021) – Earthrise: Can Climate Capitalism Save The Planet?  
<https://www.earthrise.studio/reads/can-capitalism-save-the-planet>

Oxfam International, (2020?) – Oxfam International: 5 natural disasters that beg for climate action  
<https://www.oxfam.org/en/5-natural-disasters-beg-climate-action#:~:text=Increases%20of%20air%20and%20water,seasons%2C%20heavier%20precipitation%20and%20flooding.>

Park, A (July 10 2023) – Time Magazine: More Europeans Died Because of Heat in 2022 Than Any Year in Recorded History  
<https://time.com/6292986/europe-heat-deaths-2022-climate-change/#:~:text=Most%20of%20these%20deaths%20occurred,2019%2C%20and%2033%2C000%20in%202020.>

Pavid, K (March 12 2021) – National History Museum: Transform financial systems so they are in service of nature, say experts  
<https://www.nhm.ac.uk/discover/news/2021/march/transform-financial-systems-so-they-are-in-service-of-nature.html>

Sheppard, B (October 31 2022) – PwC: Can shareholder capitalism help solve climate change?  
<https://www.pwc.com/gx/en/services/sustainability/publications/cop26/can-shareholder-capitalism-help-solve-climate-change-pwc-cop26.html#:~:text=Business%20is%20at%20the%20heart,the%20value%20of%20their%20investments.>

Smith, S (2011) – Environmental Economics

United Nations (April 2030) – United Nations Environment Programme Finance Initiative: Transform financial systems so they are in service of nature say experts  
<https://www.unepfi.org/net-zero-banking/>



Whiffin, A (March 19 2022) – The Financial Times: Carbon counting: how much do your lifestyle choices cost the planet?

<https://www.ft.com/content/1db76427-fbd8-498c-9f27-7e6427cad43f>

World Meteorological Organization (August 3 2023) - World Meteorological Organization:

Exceptional heat and rain, wildfires and floods mark summer of extremes

<https://public.wmo.int/en/media/news/exceptional-heat-and-rain-wildfires-and-floods-mark-summer-of-extremes>