

Climate change poses a threat to health equality in the UK: The Longevity Science Panel report

Monday 7 November 2022 – The Longevity Science Panel, in collaboration with L&G, today publish a report analysing the current and future impacts of climate change on the UK's health. The research reveals that climate change will be experienced unevenly across different sections of the UK population, and may deepen health inequalities in physical and mental health in the UK.

The report titled, *The Effects of Climate Change on Health in the UK*, shows that the most economically deprived and those who are already frail through age or having long-term health conditions will be the most vulnerable to high temperatures and shocks induced by adverse weather events.

Many of the health inequalities driven by climate change are yet to be fully understood. Current literature focuses on mortality statistics, but the report from the Longevity Science Panel identifies the broader health inequality impacts from climate change, including mental health.

The research also differentiates the direct impacts of climate change, often arising from physical hazards such as higher temperatures and increased flooding, as well as the indirect consequences that will potentially arise due to the global negative economic consequences of climate change and in particular a disorderly transition to Net Zero.

Direct health impacts of climate change

Compared to many other countries, the Longevity Science Panel research found that the direct impacts of climate change such as heat waves, flooding and the increased spread of vector borne diseases, are likely to be relatively modest. This can be attributed to two factors: firstly, the UK's geographic location in the Northern hemisphere and temperate climate, and secondly, the country's economic resources to adapt houses, workplaces and infrastructure to reduce the adverse impacts of climate change.

Indirect health impacts on physical and mental health inequalities in the UK

However, the research found that greater emphasis needs to be given in climate policy development to ensure that the large existing inequalities in health are not further exacerbated by indirect implications from climate change – such as mental health challenges arising from displacement after a flood. Indirect implications that risk being overlooked include:

- **Socio-economic:** When economies are stressed the health of the most disadvantaged is disproportionately affected:
 - Climate change-related disruptions to global food production and supply chains will reduce food security, particularly for low-income families
 - Lower socio-economic households are more likely to be exposed to the damage caused by extreme weather events as poverty tends to force people to live in higher risk areas, but often lacking the disposable income to adequately prepare for the hazards associated with climate change
 - The build quality of certain lower income and private rental homes can make them more vulnerable to severe damage during adverse weather events
- **Gender inequalities:** Women are likely to be impacted more by climate effects than men. They are more often the primary caregivers, and these responsibilities can be considered an additional source of stress in times of adversity, particularly when infants and children in their care are threatened directly by displacement or food insecurity.
- **Age inequalities:** The young and the old are disproportionately affected by climate change compared to working age adults. This is due to differences in physiology, impacts on education, development, exposure, vulnerability to illness, lack of social support, declining health, and disruption to daily activities.
- **Mental health:** Climate change can negatively impact mental health in two main ways: by causing actual harm to people, family members, homes, livelihoods or culture, or by acting as a threat of harm and source of uncertainty.

Understanding the economic implications of climate change

The Longevity Science Panel report also reveals that disruptions to the UK economy, in part caused by climate-induced global economic stresses, are a key but under-appreciated indirect pathway through which climate change may adversely impact on population health in the UK.

Professor David Leon, Professor of Epidemiology at London School of Hygiene & Tropical Medicine commented: *“There is overwhelming evidence that man-made changes in the climate are having an impact on the natural environment and on human populations. The question is what are going to be the effects on health? In the UK, although warmer winters may reduce levels of cold-related deaths, heat waves will bring other problems.*

However, this new report suggests that in this country more major impacts on health and welfare may come from the negative and more indirect impact that climate change will have on the global economy, agriculture and supply chains. As we saw in the 2008 crash and also today through events set off by the Russian invasion of Ukraine, our economy and the welfare of the UK population cannot be insulated from global crises. The possibility of unplanned and disorderly human responses to climate change are real. These in turn could have damaging consequences on the UK economy and through this to health of the population, and of the least advantaged in particular. This report provides a broad and accessible perspective on this complex set of issues, and will hopefully help those having to plan for our uncertain future better informed about the science as well as the regulatory framework around UK climate policy today.”

Efforts to mitigate climate change by reducing fossil fuel use are taken on the basis that costly action today reduces substantive longer-term risk. Economic modelling strongly supports the cost-effectiveness of early mitigation, even when comparing scenarios that achieve Net Zero by 2050. However, mitigation policies are dependent on international co-operation. They are subject to the ‘commons dilemma’, where short term and local economic or adaptation interests are at odds with the long-term and global mitigation interests.

Looking ahead, future progress on climate change will also depend on more systemic changes and technologies that have yet to be developed, as well as continued public support for measures that threaten jobs, economic growth, and established ways of living.

Dame Karen Dunnell, Chair of the Longevity Science Panel, added: *“The potential adverse effects of climate change would be experienced unevenly across different sections of the UK population, deepening the existing health inequalities. The risks are greatest for those already most vulnerable to poor health, particularly those that rely on others for care such as children, the elderly, and those with disabilities and pre-existing conditions. The need for the costliest mitigations and adaptations related to climate change are concentrated in the most deprived areas whose residents are the least able to afford them. These need to be considered in public policies.”*

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To view the full report, *The Current and Future Effects of Climate Change on Health in the UK*, please follow the link here: <https://www.longevitypanel.co.uk/landg-assets/longevity-panel/climate-change-and-health.pdf>

About The Longevity Science Panel

The Longevity Science Panel is a group of experts brought together to advise L&G on the factors that affect life expectancy in the UK. The Panel uses a multidisciplinary approach to monitor the ever-changing influences on life expectancy, drawing on its members' expertise in social/actuarial science, epidemiology, medicine, and healthcare system development.

Each year, the Panel releases an Annual Report on a topic of interest, aiming to advise key persons across industries in the UK who have a professional interest in life expectancy, such as risk managers, planners, investors and modellers. These annual reports cover a wide range of topics, with last years report looking at the impact of COVID 19. For more detail, see the following:

[Click here for the latest press release \(PDF: 139Kb\)](#)

[Click here for the Summary of COVID-19 Report \(PDF: 106Kb\)](#)

[Click here for the COVID-19 report \(PDF: 3.5Mb\)](#)

This 2022 report provides an overview of what is known about the current and future impacts of climate change on health, wellbeing and longevity, and the sources of uncertainty in predicting these impacts. It is intended to be useful to anyone who needs to take account of the impact of climate change on health in their day-to-day work. This includes those responsible for strategic planning in organisations in the public and private sectors in the United Kingdom. It will focus the United Kingdom (UK) specifically, and high-income countries more generally.

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*At 31 Dec 2021