

Written evidence submitted by Population Matters

An examination of the relationship between climate change and population growth, the effects of this relationship on displacement and population flows, both within the UK and across borders – submission of evidence by Population Matters.

Climate Change and Population Growth

Population Matters has run a dedicated campaign for several years on human population growth as an interconnected driver of climate change. We have previously released a fully referenced report on the issue, *The Climate Crisis: Why Population Matters in 2022*ⁱ, with the key points of our report summarised below.

The global human population has increased from 3.7 billion in 1970 to over 8 billion todayⁱⁱ. 1970 was the last time humanity lived within the Earth's regenerative capacityⁱⁱⁱ. Regenerative capacity defined as the capacity of ecosystems to produce useful biological materials and absorb waste materials generated by humanity. Though it must be recognised that during this period, over a third (36%) of the global population lived in extreme poverty^{iv}. While in recent decades we have made great strides to reduce extreme poverty, with now 9.5% of the global population classified as living in extreme poverty^v, humanity now exceeds the biocapacity of the earth by 70%^{vi}. Anthropogenic climate change is a significant factor in humanity's environmental footprint and widely regarded as a barometer for the collective impact on all planetary boundaries.

The Global Footprint Network estimates that humanity is currently using up renewable resources (water, timber, land) 1.7 times faster than the planet can regenerate, the equivalent of using the resources of 1.7 earths.^{vii}

The UN's Global Resources Outlook 2024 report stated that humanity's unsustainable demand for resources is the main driver of the triple planetary crisis, defined as 'climate change, biodiversity loss, pollution and waste'. The report stated, "*Over the past twenty years, affluence explains 40% of the global increase of material extraction, while population contributes to 27%. Technology is found to only mitigate global material extraction by 5%.*"^{viii}

It's important to emphasise here that 'greener' technologies will not be the immediate solution to all the environmental pressures arising from our increased demand for resources. Instead, it's predicted that a transition to green technologies is likely to place an even greater demand on virgin materials such as lithium, gold, and copper, to be used in electronic components, as the structures in place to recycle materials or create circular industries are currently insufficient to be scaled up to meet expected future demand^{ix}.

The UN Global Resources Outlook report predicts, "*Material extraction could increase by almost 60% from 2020 levels by 2060, from 100 to 160 billion tonnes – far exceeding what is required to meet essential human needs for everyone.*"^x

The UN's current medium projection is for a population of 9.7 billion in 2050 and 10.4 billion in 2100^{xi}, the vast majority of whom will be born in the Global South. Meeting the welfare needs of these people within planetary boundaries represents a conspicuous challenge.

Population Growth and Carbon Emissions

The significant contribution of population growth to past and future greenhouse gas emissions has been recognised by key scientific bodies, including the World Scientists' Warning of a Climate

Emergency and the Intergovernmental Panel on Climate Change (IPCC). The IPCC's Sixth Assessment Report, *Climate Change 2022: Mitigation of Climate Change*, clearly cited "*Globally, Gross Domestic Product (GDP) per capita and population growth remained the strongest drivers of CO2 emissions from fossil fuel combustion in the last decade.*"^{xii}

The IPCC has identified potential future high population growth as a "key impediment" to hitting the critical target of limiting global warming to 1.5°C above pre-industrial levels^{xiii}.

In 2022, the world-leading study of climate change solutions, Project Drawdown, concluded that sustainable development actions, such as funding increased access to family planning and girls' education, to curb population growth to the UN's medium population projection for 2050 would save about 69 gigatonnes (Gt) of emissions by 2050, making them the third most effective solution in limiting warming to 2°C, and the seventh most effective in limiting warming to 1.5°C, by 2100^{xiv}.

The 2023 Intergovernmental Panel on Climate Change (IPCC) report likewise stated that low population growth (a result of low fertility) is an important factor in limiting global warming^{xv}.

The Long Curve of Population

A recent study published in *The Lancet*, titled "Dramatic declines in global fertility rates set to transform global population patterns by 2100", recently stirred a lot of media attention in the UK, with multiple headlines in *The Times* and *The Telegraph* fearing of a "baby bust" or a demographic crisis in the Global North due to ageing populations. However, it's important to emphasise that the study affirmed that we are still most likely to have a population at the end of this century that is larger than at the start of it. This is due to demographic momentum, defined as the tendency for growing populations to continue growing after a fertility decline because their demographics contain a large distribution of young people coming into their reproductive years.

It is recognised that due to demographic momentum addressing population growth will take too long to tackle the immediate threat of climate change in the coming decade. However, in the long run, bending the global population curve will make a significant difference, simultaneously also bending the curves on the rate of future carbon emissions and resource consumption. The researchers of *The Lancet* study themselves emphasised the critical environmental benefits of a lower population, the report stated "*a smaller global population in the future could alleviate some strain on global food systems, fragile environments, and other finite resources, and also reduce carbon emissions. A 2012 study suggests that if global population were to follow a low-growth rather than a medium-growth path, worldwide carbon emissions would be 15% lower by 2050 and 40% lower by 2100.*"^{xvi}

Addressing population growth is a vital long-term solution to climate change, curbing the growth of population will significantly assist current targets to limit global temperature rises within the 1.5-degree limit as set out by the Paris Agreement.

Rising Affluence

Climate change has historically been and continues to be primarily driven by the wealthiest countries in the Global North due to their high per capita emissions.

However, the gap between the emissions of the Global North and the Global South is narrowing. Between 1990 and 2019, more than 80% of the global increase in CO2 emissions was confined to only four countries – China, India, Iran, and Indonesia – which together accounted for almost 41% of

the world's population in 2019, with China's per capita domestic consumption emissions now approaching those of EU countries^{xvii}.

A study by Chaurasia (2020) shows that, although between 1990 and 2019 economic growth was the most important source of global growth in CO2 emissions (around two thirds), population growth accounted for around a third of the increase in emissions. Significantly, it was also shown that the growth in emissions accounted for by population growth cancelled out more than three quarters of the CO2 emission savings resulting from energy efficiency improvements, such as the use of lower emission fuels and renewables^{xviii}.

The important point to emphasise is that it requires more than just a change in technology to tackle the environmental crisis. Whilst we emphasise the necessary need to curb the growth of global population, we must also acknowledge the need for countries in the Global North, such as the UK, to reduce their excessive consumption of resources to both reduce emissions and ensure resources are redistributed to improve the lives of the poorest half of the global population.

The climate crisis is already severely impacting the countries and regions that are projected to see the highest rates of population growth. This population explosion will exacerbate the negative effects of climate change, including drought, economic hardship, and conflict. To improve the climate resilience of these countries it is a necessity that we help accelerate their demographic transition.

The 2023 State of the Climate Report: Entering Uncharted Territory, stated *"We also call to stabilize and gradually decrease the human population with gender justice through voluntary family planning and by supporting women's and girls' education and rights, which reduces fertility rates and raises the standard of living. These environmentally conscious and socially equitable strategies necessitate far-reaching and holistic transformations in the long run..."*^{xix} And it is this message that we would urge to the committee, to acknowledge that addressing population growth is a necessary and important factor in improving climate change resilience and long-term security.

Climate Change, Conflict, and Migration

The impacts of climate change will be global and cross-generational; and will inequitably cause the most harm to climate-vulnerable countries, predominantly developing countries in the Global South.

As a result of the instability and environmental degradation caused by climate change, it's predicted that the livelihoods of millions of people in climate-vulnerable countries will be affected and displaced from their homes. If the government seeks to secure the UK's borders and fulfil its commitments under international aid, then they must do so by improving the climate resilience of the most vulnerable countries likely to be affected.

Environmental changes attributable to climate change do not mechanistically cause conflict, however they are generally recognised as a threat multiplier under combinations of certain socio-economic and demographic conditions. Regions dependent on agriculture with low levels of development and poor governance with marginalised, and usually youthful, populations (i.e. those regions already known to disproportionately vulnerable to climate change) are potential flashpoints for unrest and conflict in conditions of environmental stress^{xx}.

Similarly, there is no definitive link between climate change and migration, rather mass migration is typically triggered by a range of factors including social instability, conflict, economic factors, as well as environmental impacts on people's livelihoods. The International Organization for Migration

(IOM) stated there are “*so many other social, economic and environmental factors at work*” that it is difficult to establish a “*linear, causative relationship between anthropogenic climate change and migration*”.^{xxi}

Nevertheless, one of the most significant ‘push’ factors of migration, is environmental pressure impacting peoples’ livelihoods. The UN Food and Agriculture Organisation reports that almost half of the world’s population relies on agrifood systems, with 875 million people belonging to households that work in primary agriculture^{xxii}. However, it has been shown that climate-driven drought and desertification are increasingly rendering large areas of land infertile, driving communities below the poverty line and triggering migration. In addition, the frequency of catastrophic environmental events, such as flooding and wildfires destroying people’s homes are again a factor likely to contribute to relocation. It’s already become apparent that the intensity and frequency of destructive environmental events will be made more severe by climate change.

UNHCR estimated the number of people who are “forcibly displaced” by “weather-related sudden-onset hazards”, in 2022 to be 31.8 million people, with the displacements largely the result of floods (19.2 million), storms (10.0 million) and droughts (2.2 million), with wildfires, landslides and extreme temperatures forming the remainder^{xxiii}.

Increased global temperatures, made apparent with record-breaking heatwaves last summer across Europe, are also a public health concern. The UN’s Interconnected Disasters Report: Unbearable Heat cited that currently, around 30% of the global population is exposed to deadly climate conditions for at least 20 days per year, and this could rise to over 70% by 2100.^{xxiv}

Despite there being no direct links between climate change and increased migration, there is a consensus that climate change is increasing the frequency and intensity of extreme weathers and environmental events which contribute to forcible displacements.

In 2021, the World Bank released its Groundswell report, an analysis on future climate migration, the report estimated that “*as many as 216 million people could move within their own countries due to slow-onset climate change impacts by 2050*”^{xxv}, with 86 million predicted to be displaced in sub-Saharan Africa alone. Groundswell has been categorised as a ‘worse case’ scenario, with the report itself citing that it’s headline figures could be reduced by up to 80% in a more “climate-friendly” scenario, where greenhouse gas emissions are sharply reduced.

There is a wide consensus that a number of countries’ climate targets, including the UK’s^{xxvi}, are not being sufficiently met for greenhouse gas emissions to be reduced, and so whilst the future number of potential climate migrants cannot be accurately predicted, it’s clear that millions of people will be affected and displaced by climate change, with global warming likely to breach the 1.5-degree limit.

The Groundswell report notes “*climate change impacts will hit the poorest and most vulnerable regions the hardest*” and suggests that more inclusive development, which increases the capability of vulnerable nations and regions to adapt, could reduce climate-related displacement by almost 60%^{xxvii}.

Whilst most climate-related migration is predicted to be internal migration within countries or regions, this could still have a knock-on effect with immigrants seeking entry to the UK, including by illegal means.

The wisest cause of action is to build resilience abroad and help people to stay where they are, by improving the climate resilience of the most climate vulnerable countries.

Climate Change and Inequality

Although population growth can clearly be demonstrated to be a significant indirect driver of climate change, perhaps the most concerning relationship between the two is the exacerbation of climate change's negative effects on welfare.

While the exact relationships are complex and geographically uneven, a broad consensus exists on the adverse effects of high rates of population growth on low levels of economic development, the availability of natural resources, climate vulnerability, resilience, and adaptation^{xxviii}. With the highest rate of population growth Sub-Saharan Africa is also one of the most vulnerable continents to climate change^{xxix}.

The disruption caused by climate-change often exacerbates existing inequalities of power. Since they are frequently the most disadvantaged and least skilled members of communities, women and girls are disproportionately vulnerable. In the absence of adaptive capacity, extreme weather events can disrupt sexual health and family planning services, elevating female vulnerability to such events and increase their exposure to sexual and gender-based violence^{xxx}. Accelerating the demographic transition of these countries is likely to significantly improve their resilience and adaptive capacity in the face of the effects of climate change.

Shortfalls in SRHR Funding

The 1994 Cairo International Conference on Population and Development was clear on the benefits of slowing population growth and the urgent need to empower all women and girls, yet two decades later current policies have failed them. Almost half of partnered women in low- and mid-income countries still have no decision-making power over their own bodies, while one-in-five girls today is married before she turns 18, gender-based violence still affects one-in-three women globally, and 257 million women worldwide have an unmet need for modern contraception^{xxxi}.

While we've seen important progress in reducing the proportion of women affected by some of these injustices, in many cases, the total number of affected women is still growing due to population growth outstripping development efforts.

International funding for reproductive health and rights falls far short of what is needed to fulfil the basic rights of all women and girls. It must be recognised that investing in women and girls is key to advancing all 17 of the Sustainable Development Goals. High levels of fertility drive rapid population growth in many developing countries, contributing to both a cause and a symptom of slow progress in development. Slow progress in development will be a contributing driver to social instability and conflict, whilst rapid population growth will lead to resource scarcity, all these factors amplifying each other in turn and preventing individual states from having the resources or stability required to implement effective strategies to shore up their climate resilience. If nothing is done, this is likely to be the circumstance that will lead to mass climate-related migration.

There remains a significant and detrimental taboo to addressing population in some development circles. However, intentionally ignoring population, obscures the long-term benefits that curbing the bend of population growth can do in reducing future carbon emissions, and improving the climate resilience of multiple countries.

To be concerned about population is to be concerned about people, their needs, their rights, and those of future generations. We must end the siloing of climate change mitigation, environmental policies, and reproductive health and rights: all three are inextricably linked as drivers and causes, tackling all three in a holistic approach is the most beneficial solution.

By addressing population growth through positive, ethical, and choice-based means, we give ourselves the opportunity to enhance the quality of people's lives and shore up climate resilience in climate-vulnerable countries. Empowering strategies focused on women and girls, including increased access to family planning and girls' education is vital to hasten the demographic transition of climate-vulnerable countries, ensuring that they achieve peak emissions sooner and can develop in a sustainable fashion, the benefits of which will increase their climate resilience and limit climate-related migration.

Women, Climate, and Security

In 2017, the United States put forward its Women, Peace, and Security (WPS) Act^{xxxii}, and whilst it doesn't directly address climate change mitigation, it's focus on empowering women in conflict resolution and peacebuilding efforts results in multiple indirect benefits for climate change mitigation.

The Act's focus on empowering women for sustainable resource management reflects the positive results of studies that have shown that societies with greater gender equality tend to manage resources more sustainably. When women have a say in decision-making processes related to land use, water management, and resource allocation, studies have shown it leads to more sustainable practices that can help mitigate climate change^{xxxiii}.

A triggering factor for climate-related migration is likely to be increased conflict and instability in various regions. By actively promoting peace and security through increased women's participation in peacebuilding, the WPS Act creates a more stable environment where countries can focus on climate mitigation and resilience strategies. Finally, the WPS Act's focus on women as leaders in climate solutions is vital, as women are often at the forefront of climate activism and developing solutions at the community level. The WPS Act through empowering women can indirectly contribute to a wider range of voices and perspectives being included in climate change discussions and solutions.

The UK could build upon the foundation of the WPS Act, by recognising that investment in sexual health and reproductive rights, such as voluntary family planning services, as well as increased girl's education and economic opportunities, is an effective means to reduce the impact of population growth on future carbon emissions, as well as a path to ensure empowered women can be at the forefront of greater climate resilience in climate-vulnerable countries.

Population Matters would advocate for the UK to adopt its own framework that explicitly calls upon the value of strategies focused on empowering women and girls, and the role they can play in adapting to, and combatting climate change impacts.

References

- ⁱ *The Climate Crisis: Why Population Matters - Population Matters Briefing* (2022) [populationmatters.org](https://populationmatters.org/content/uploads/2022/09/Population%20Matters%20Climate%20Change%20Briefing%20-%20July%202022.pdf). Available at: <https://populationmatters.org/content/uploads/2022/09/Population%20Matters%20Climate%20Change%20Briefing%20-%20July%202022.pdf> - July 2022.pdf (Accessed: 05 May 2024).
- ⁱⁱ *2022 Revision of World Population Prospects* (2022) *United Nations*. Available at: <https://population.un.org/wpp/> (Accessed: 05 May 2024).
- ⁱⁱⁱ Samways, D. (2022) *Population and Sustainability: Reviewing the Relationship Between Population Growth and Environmental Change*, *WHP Journals*. Available at: <https://www.whp-journals.co.uk/JPS/article/download/698/500/3728> (Accessed: 05 May 2024).
- ^{iv} Ibid
- ^v *End poverty in all its forms everywhere - SDG indicators* (2021) *United Nations*. Available at: <https://unstats.un.org/sdgs/report/2021/goal-01/> (Accessed: 05 May 2024).
- ^{vi} Samways, D. (2022) *Population and Sustainability: Reviewing the Relationship Between Population Growth and Environmental Change*, *WHP Journals*. Available at: <https://www.whp-journals.co.uk/JPS/article/download/698/500/3728> (Accessed: 05 May 2024).
- ^{vii} *How many earths?* (2023) *Earth Overshoot Day*. Available at: <https://overshoot.footprintnetwork.org/how-many-earths-or-countries-do-we-need/> (Accessed: 05 May 2024).
- ^{viii} UNEP (2024) *Global Resources Outlook 2024*, *UNEP*. Available at: <https://www.unep.org/resources/Global-Resource-Outlook-2024> (Accessed: 05 May 2024).
- ^{ix} Ibid
- ^x Ibid
- ^{xi} *2022 Revision of World Population Prospects* (2022) *United Nations*. Available at: <https://population.un.org/wpp/> (Accessed: 05 May 2024).
- ^{xii} The Intergovernmental Panel on Climate Change (2022) *AR6 Climate Change 2022: Mitigation of Climate Change*, https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_FinalDraft_FullReport.pdf (Accessed: 05 May 2024).
- ^{xiii} The Intergovernmental Panel on Climate Change (2018) *Special Report: Global Warming of 1.5 °C*, <https://www.ipcc.ch/sr15/> (Accessed: 05 May 2024)
- ^{xiv} Project Drawdown (2022), *Table of Solutions*, <https://drawdown.org/solutions/table-of-solutions> (Accessed: 05 May 2024)
- ^{xv} *Global fertility in 204 countries and territories, 1950–2021, with forecasts to 2100: A comprehensive demographic analysis for the global burden of disease study 2021 - the Lancet*. Available at:

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(24\)00550-6/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(24)00550-6/fulltext) (Accessed: 05 May 2024).

- ^{xvi} Ibid
- ^{xvii} Samways, D. (2022) *Population and Sustainability: Reviewing the Relationship Between Population Growth and Environmental Change*, WHP Journals. Available at: <https://www.whp-journals.co.uk/JPS/article/download/698/500/3728> (Accessed: 05 May 2024).
- ^{xviii} Ibid
- ^{xix} Ripple, W.J. et al. (2023) *The 2023 state of the Climate Report: Entering uncharted territory*, OUP Academic. Available at: <https://academic.oup.com/bioscience/article/73/12/841/7319571> (Accessed: 05 May 2024).
- ^{xx} Kelley, C. 2016. 'On sustainability, vulnerability, climate and conflict'. *The Journal of Population and Sustainability* 1 (1): 35–44. <https://doi.org/10.3197/jps.2016.1.1.35> and Koubi, V. 2019. 'Climate change and conflict'. *Annu. Rev. Political Sci.* 22:343–60 <https://doi.org/10.1146/annurev-polisci-050317-070830>
- ^{xxi} (2008) *Migration and climate change - IOM publications*. Available at: https://publications.iom.int/system/files/pdf/mrs-31_en.pdf (Accessed: 05 May 2024).
- ^{xxii} *Almost half the world's population lives in households linked to Agrifood Systems* (2023) *FAO.org*. Available at: <https://www.fao.org/newsroom/detail/almost-half-the-world-s-population-lives-in-households-linked-to-agrifood-systems/en> (Accessed: 05 May 2024).
- ^{xxiii} *Grid 2023: 2023 global report on internal displacement* (2023) *IDMC*. Available at: <https://www.internal-displacement.org/global-report/grid2023/> (Accessed: 05 May 2024).
- ^{xxiv} United Nations University - Institute for Environment and Human Security (UNU-EHS) (2023) *Unbearable Heat, Interconnected Disaster Risks*. Available at: <https://interconnectedrisks.org/tipping-points/unbearable-heat> (Accessed: 05 May 2024).
- ^{xxv} (2018) *Groundswell: Preparing for Internal Climate Change*. Available at: <https://documents1.worldbank.org/curated/en/846391522306665751/pdf/124719-v2-PUB-PUBLIC-docdate-3-18-18WBG-ClimateChange-Final.pdf> (Accessed: 05 May 2024).
- ^{xxvi} *United Kingdom* (no date) *Climate Action Tracker*. Available at: <https://climateactiontracker.org/countries/uk/> (Accessed: 05 May 2024).
- ^{xxvii} (2018) *Groundswell: Preparing for Internal Climate Change*. Available at: <https://documents1.worldbank.org/curated/en/846391522306665751/pdf/124719-v2-PUB-PUBLIC-docdate-3-18-18WBG-ClimateChange-Final.pdf> (Accessed: 05 May 2024).
- ^{xxviii} Das Gupta, M., J. Bongaarts and J. Cleland. 2011. *Population, Poverty, and Sustainable Development: A Review of the Evidence*. Policy Research Working Paper 5719. Washington D.C.: The World Bank.
- ^{xxix} UN. 2022. *World Population Prospects 2022: Summary of Results*. UN DESA/ POP/2022/TR/NO. 3. New York: United Nations Department of Economic and Social Affairs, Population Division. And IPCC. 2014. 'Summary for policymakers'. In *Climate change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and sectoral aspects*. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge: Cambridge University Press. pp. 1–32. https://www.ipcc.ch/site/assets/uploads/2018/03/ar5_wgii_spm_en-1.pdf (accessed 29 November 2021). And IPCC. 2022: *Climate Change 2022: Impacts, Adaptation, and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Ed by. H.-O. Pörtner, D.C. Roberts, M.

Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löscke, V. Möller, A. Okem and B. Rama). Cambridge and New York: Cambridge University Press. <https://doi.org/10.1017/9781009325844>

- ^{xxx} Kwauk, C. and A. Braga. 2017. Three Platforms for Girls' Education in Climate Strategies. Brooke Shearer Series Number 6. Washington DC: Brookings. <https://www.brookings.edu/wp-content/uploads/2017/09/platforms-for-girls-education-in-climate-strategies.pdf> (accessed 25 November 2021).
- ^{xxxi} *The case for action in the neglected crisis of unintended pregnancy* (2022) *United Nations Population Fund*. Available at: <https://www.unfpa.org/swp2022> (Accessed: 05 May 2024).
- ^{xxxii} (2017) *Women, peace, and Security - United States Department of State*. Available at: <https://www.state.gov/women-peace-and-security/> (Accessed: 05 May 2024).
- ^{xxxiii} (2014) *Gender equality and sustainable development ...* Available at: https://sustainabledevelopment.un.org/content/documents/1900unwomen_surveyreport_advance_16oct.pdf (Accessed: 05 May 2024).