

Report warns of severe future effects of climate change on the U.K.

July 15 2016, by Joe Paxton



Credit: University of Manchester

Two experts from Manchester have contributed to a new Government report on climate change, which predicts that global warming will hit our shores with severe heatwaves, flooding and water shortages.

The contributors, who include Environment and Climate Change Lecturer Dr Ruth Wood and Professor of Ecology Richard Bardgett, say that action to tackle urgent threats including widespread flooding and

new diseases must be taken promptly.

The report also warns that wars and migration around the world caused by climate change could have significant consequences for the UK through disrupted trade and more overseas military intervention.

The worst-case scenarios - which will become reality if action to tackle climate change fails - foresees searing heatwaves reaching temperatures of 48°C in London, and the high 30s across the rest of England.

The wide-ranging assessment of the dangers of climate change to the UK has been produced over three years by a team of 80 experts, and reviewed by many more. The main analysis is based on the projected temperature rise if the last year's Paris global climate agreement is fully delivered, and takes account of plans already in place to cope with impacts.

"I was delighted to be asked to become a contributing author," said Dr Wood. "The experience provided valuable insights into the evidence required by decision makers in the energy sector when responding to challenges and opportunities arising from climate change."

"Climate change poses major threats to both natural and managed systems of the UK and worldwide," said Professor Bardgett. "Not only does it pose significant risks to our natural capital, including terrestrial, marine, freshwater and coastal ecosystems, but also it threatens our ability to produce food, for example due to increased incidence of pests and diseases, and the erosion of our soils."

The key threats

- Heatwaves: By the 2040s, deadly heatwaves such as the one in 2003 when UK temperatures peaked at 38.5°C will be the norm,

leading to a tripling in heat-related deaths. There are currently no policies which ensure that homes, businesses, public transport, schools and hospitals remain tolerable in high heat.

- **Water shortages:** Severe [water shortages](#) are expected as summers get drier, and will extend across the country by the 2050s. Demand for water will outstrip supply 2.5 times in many places in the UK if temperatures are driven up significantly.
- **Floods and coastal erosion:** On average, flooding already causes £1bn of damage every year - but the risks will rise further still, bringing floods to places not currently in danger, as climate change leads to more intense rainfall. By 2050, the number of households at significant risk of flooding will more than double to 1.9m if the global temperature rises by 4°C.
- **Natural environment:** The proportion of prime farmland is expected to fall from 38% to 9%, and crop growing in eastern England and Scotland could be ended by degraded soil and water shortages. Warming seas are pushing key species northwards, meaning the entire marine food chain may be affected.
- **Food:** Food prices are likely to be driven up by climate change, with extreme weather leading to lost crops and sudden price shocks. About 40% of the UK's food is imported, making it vulnerable to droughts and floods caused by [climate change](#) around the world.
- **Diseases and pests:** Dangers posed by new diseases and pests invading the UK as the climate gets warmer require urgent research. Higher temperatures will lead to an increased risk of dengue fever, Zika virus and invasive species such as the Asian tiger mosquito.

More information: The report is available online:

[www.theccc.org.uk/wp-content/u ... n-Climate-Change.pdf](http://www.theccc.org.uk/wp-content/uploads/2014/06/Adaptation-to-Climate-Change.pdf)

Provided by University of Manchester

Citation: Report warns of severe future effects of climate change on the U.K. (2016, July 15)
retrieved 20 April 2024 from

<https://phys.org/news/2016-07-severe-future-effects-climate-uk.html>

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