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Population control would do little to reduce humanity's ecological footprint this century

New scenario modelling of the world's human population has concluded that even stringent fertility restrictions or a catastrophic mass mortality would not bring about large enough change this century to solve issues of global sustainability.



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Ecologists Professor Corey Bradshaw and Professor Barry Brook from the University of Adelaide's Environment Institute say that 'virtually locked-in' population growth means the world must focus on policies and technologies that reverse rising consumption of natural resources and enhance recycling, for more immediate sustainability gains.

In a paper published in the *Proceedings of the National Academy of Sciences of the USA*, the 2 authors say fertility reduction efforts, through increased family-planning assistance and education, should still be pursued, as this will lead to hundreds of millions fewer people to feed by mid-century.

'Global population has risen so fast over the past century that roughly 14 per cent of all the human beings that have ever existed are still alive today – that's a sobering statistic,' says Professor Bradshaw.

'This is considered unsustainable for a range of reasons, not least being able to feed everyone as well as the impact on the climate and environment.

'We examined various scenarios for global human population change to the year 2100 by adjusting fertility and mortality rates to determine the plausible range of population sizes at the end of this century.

'Even a worldwide one-child policy like China's, implemented over the coming century, or catastrophic mortality

events like global conflict or a disease pandemic, would still likely result in 5-10 billion people by 2100.'

The researchers constructed nine different scenarios for continuing population ranging from 'business as usual' through various fertility reductions, to highly unlikely broad-scale catastrophes resulting in billions of deaths.

'We were surprised that a five-year, WWIII scenario mimicking the same proportion of people killed in the First and Second World Wars combined, barely registered a blip on the human population trajectory this century,' says Professor Brook.

'Often when I give public lectures about policies to address global change, someone will claim that we are ignoring the "elephant in the room" of human population size.

'Yet, as our models show clearly, while there needs to be more policy discussion on this issue, the current inexorable momentum of the global human population precludes any demographic quick fixes to our sustainability problems.

'Our work reveals that effective family planning and reproduction education worldwide have great potential to constrain the size of the human population and alleviate pressure on resource availability over the longer term. Our great-great-great-great grandchildren might ultimately benefit from such planning, but people alive today will not.'

Professor Bradshaw adds: 'The corollary of these findings is that society's efforts towards sustainability would be directed more productively towards reducing our impact as much as possible through technological and social innovation.'

Source: University of Adelaide

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