

Millions of lives saved annually by 2040 if countries raise their climate ambitions: modelling study

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Adopting policies that are consistent with achieving the Paris Agreement and prioritise health, could save 6.4 million lives due to better diet, 1.6

million lives due to cleaner air, and 2.1 million lives due to increased exercise, per year, across nine countries.

New research from The Lancet Countdown on Health and Climate Change published in a special issue of *The Lancet Planetary Health* journal highlights the benefits to health if countries adopt climate plans—Nationally Determined Contributions (NDCs) - that are consistent with the Paris Agreement aim of limiting warming to "well below 2°C".

The countries considered in the study represent 50% of the world's population and 70% of the world's emissions—Brazil, China, Germany, India, Indonesia, Nigeria, South Africa, the UK and the US.

Paris signatories are updating and revising their NDCs ahead of COP26 this year, which were due to be submitted before the end of last year, and remain to be announced in the majority of countries (including six out of the nine countries included in the study). Currently, NDCs globally are not strong enough to achieve the Paris agreement (risking a global temperature rise of greater than 3°C), and the authors emphasise that the lives saved through better diet, cleaner air and increased exercise, provide yet another rationale for strengthening commitments.

Lead author Ian Hamilton, Executive Director of The Lancet Countdown on Health and Climate Change, said: "Our report focuses on a crucial but often overlooked incentive for tackling climate change. Unlike the direct benefits of carbon mitigation which are ultimately long-term and understood in terms of damage limitation, the health co-benefits of ambitious climate policies have an immediate positive impact. The message is stark. Not only does delivering on Paris prevent millions dying prematurely each year, the quality of life for millions more will be improved through better health. We have an opportunity now to place health in the forefront of climate change policies to save even more

lives."

For each nation, emissions generated from energy, agriculture and transport sectors, and annual deaths due to air pollution, diet-related risk factors and physical inactivity, were estimated for the year 2040 for three different NDC scenarios. The baseline scenario looked at current NDC policies, the second scenario (sustainable pathways scenario) at NDC policies in line with the Paris Agreement and Sustainable Development Goals, and a third scenario (health in all climate policies scenario) looking at the additional benefit from embedding explicit health objectives within the sustainable pathways scenario.

Across all nine countries, the Paris Agreement-compliant scenario, could save 5.8 million lives due to better diet, 1.2 million lives due to [cleaner air](#), and 1.2 million lives due to increased exercise. Adopting the more ambitious pathway, with explicit health objectives within the NDCs, could result in a further reduction of 462,000, 572,000, and 943,000 annual deaths attributable to air pollution, diet and [physical inactivity](#), respectively.

The authors note that number of deaths averted through air pollution, diet and [physical activity](#) were modelled separately, so they cannot be added together, as they cannot account for crossover in potential deaths averted due to air pollution, better diet, and increased exercise. As the modelling study projects into future possible scenarios, they also note that the estimates relied on various assumptions of future demographic and socio-economic trends.

The health benefits of strengthened NDC commitments are generated through both direct climate change mitigation as well as supporting actions to reduce exposure to harmful pollutants, improve diets and enable safe physical activity.

All countries benefit most from improvements to diet

While the impact of each of the three-health metrics varies from country to country, all the countries benefit most from dietary improvements under the Paris Agreement-compliant scenario. These reflect the modelled widespread adoption of flexitarian diet, aided by greater access to fruit and vegetables. While the shift sees reductions in red meat and processed food there remains a moderate consumption of food sourced from animals.

Those countries benefitting most from dietary improvements in proportional terms, are Germany with 188 deaths avoided per 100,000 of population annually, followed by the US with 171 per 100,000 and China with 167 per 100,000.

It is worth noting that deficiency in fruit, vegetables, legumes and nuts taken together is a greater health problem overall than the risk associated with eating excess red meat, according to the findings. The former accounts for 30% of deaths avoided, while the latter contributes 22%.

Future Policy Ambition

Dr. Alastair Brown, Editor-in-Chief of *The Lancet Planetary Health*, says: "As countries are being asked to increase their level of ambition ahead of COP 26 in Glasgow, the coming months represent a key moment in the fight against [climate change](#) and an opportunity to improve global health. If there is a need for a deadline to motivate action, we have it and it's November, 2021."

The authors note that some countries have strengthened their efforts since the analysis was done, with the UK and EU submitting stronger NDC targets, and China announcing its commitment to achieving carbon

neutrality before the year 2060. The Joe Biden and Kamala Harris administration have promised to commit to net zero emissions by the year 2050.

Even with these new announcements, the world is not yet on track to meet the goals of the Paris Agreement and would still face 2.5°C of warming by the end of the century.

Writing in Comment article also published in *The Lancet Planetary Health* special issue, Margaret Chan, Former Director-General of the World Health Organisation, says: "The report findings therefore provide an important further incentive not only for the world's leaders to make good on their climate commitments in new NDCs but also to align environmental and health objectives in COVID-19 recovery plans. After all, healthier populations will prove more resilient to future health shocks.

She continues: "It's also important to recognise the billions in cost-savings resulting improved [health](#) on this scale, which could help offset the up-front costs of mitigation.

More information: The public health implications of the Paris Agreement: a modelling study, *The Lancet Planetary Health*, [DOI: 10.1016/S2542-5196\(20\)30249-7](https://doi.org/10.1016/S2542-5196(20)30249-7) , [www.thelancet.com/journals/lan ... \(20\)30249-7/fulltext](http://www.thelancet.com/journals/lan.../fulltext)

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