

Shifting the focus of climate-change strategies may benefit younger generations

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Strategies to limit climate change that focus on warming in the next couple of decades would leave less of a burden for future generations.

Research led by Imperial College London and the International Institute for Applied Systems Analysis (IIASA), Austria, suggests a new underpinning logic for [strategies](#) that seek to limit [climate change](#). Their new proposal is published today in *Nature*.

Most strategies seek to limit climate change by the year 2100. The strategies may include tactics such as deployment of new renewable technologies, removing carbon from the atmosphere (through planting trees or new technologies), or mandating energy efficiency targets.

However, by focusing on the year 2100, these strategies are inconsistent with the Paris Agreement climate goal—to keep [warming](#) below 2°C, and ideally below 1.5°C, at any time in the future.

Strategies that focus on the year 2100 could allow potentially dangerous warming to happen in the short term—in the next couple of decades—and then rely on removing [carbon dioxide](#) from the atmosphere in later decades to reach the overall targets by 2100.

These strategies place a burden of investment on later generations, and also rely on carbon removal technologies being widely available, which is in no way certain and thus a risky approach.

Instead, the team suggests climate change strategies should consider when maximum warming will occur, what that level of warming should be, and whether warming is stabilised afterwards, or efforts are made to slowly reverse it.

The researchers suggest it is more sensible, and fairer, to limit warming faster before 2050 and rely less on unproven technologies and investment by [future generations](#)—or at least make these intergenerational value judgments explicit when designing climate change strategies.

Lead researcher Dr. Joeri Rogelj, from the Grantham Institute at Imperial and the IIASA, said: "When climate-change strategies were first proposed, more than 20 years ago, the planet had only warmed about 0.5°C, so there was time for a long, smooth transition to energy systems and economies that kept warming below 2°C by 2100.

"Now, however, we are at around 1°C warming and science of the last decade has shown that 2°C cannot be considered a safe limit. The need to stabilise warming more quickly is paramount, and therefore we suggest a focus on reaching [net zero carbon emissions](#) as a key milestone of any climate strategy.

"Turning the focus from the far future to the next decades, where push will come to shove in terms of adequate climate action, will help us reach the Paris Agreement goals without placing undue burden on future generations."

Net zero carbon emissions is when a region (such as a city or country) balances the carbon they emit with the carbon they remove—often by methods such as by planting trees or deploying technologies that capture and store carbon underground.

The research team suggests this benchmark should be the focus of [climate](#) change efforts in the short term, to limit warming that occurs in the next couple of decades and until it is stabilised.

From net zero carbon, countries could then decide their strategy based on how much they need to further reduce their global warming contributions through added carbon removal.

Dr. Rogelj said: "Shifting the focus to more short-term warming will underpin the next assessments by the Intergovernmental Panel on Climate Change (IPCC), and we hope it will also help policymakers

formulate realistic strategies.

"Policymakers want to know how and when we can reach net zero [carbon](#), and our new logic for strategies could make these questions answerable."

More information: A new scenario logic for the Paris Agreement long-term temperature goal, *Nature* (2019). [DOI: 10.1038/s41586-019-1541-4](#) , [nature.com/articles/s41586-019-1541-4](https://www.nature.com/articles/s41586-019-1541-4)

Provided by Imperial College London

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