

Psychology study unearths ways to bolster global climate awareness and climate action

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An international team of scientists has created a tool that can aid in increasing climate awareness and climate action globally by highlighting messaging themes shown to be effective through experimental research.

The web-based [tool](#), and the methods undergirding its creation, [appear](#) in the journal *Science Advances*.

The tool stems from a study involving nearly 250 researchers that drew more than 59,000 participants from 63 countries, including Algeria, China, Denmark, Germany, Israel, Japan, New Zealand, Peru, and the United States.

"We tested the effectiveness of different messages aimed at addressing [climate change](#) and created a tool that can be deployed by both lawmakers and practitioners to generate [support](#) for [climate policy](#) or to encourage action," says Madalina Vlasceanu, an assistant professor in New York University's Department of Psychology and the paper's lead author.

The tool, which the researchers describe as a "Climate Intervention Webapp," takes into account an array of targeted audiences in the studied countries, ranging from nationality and political ideology to age, gender, education, and income level.

"To maximize their impact, policymakers and advocates can assess which messaging is most promising for their publics," adds paper author Kimberly Doell, a senior scientist at the University of Vienna who led the project with Vlasceanu.

Previous studies have examined the effectiveness of intervention strategies aimed at boosting sustainable intentions and behaviors, such as recycling, public transportation use, and household energy saving. But these have focused on singular private mitigation actions rather than on a broad array of climate-friendly activities and support for systemic solutions. In addition, earlier work has generally centered on western, industrialized nations, raising questions about the broader applicability of these findings.

Among the messages the authors of the new paper tested presented the consequences of climate change in a "doom and gloom" style (e.g., "Climate change poses a serious threat to humanity.").

Another featured examples of successful climate actions people took in the past. An additional intervention asked participants to write a letter to a future generation member outlining what climate actions they are undertaking today to make the planet livable in 2055. Others included emphasizing the scientific consensus on the facts and framing [climate action](#) as either a patriotic or a popular choice.

To gauge the effectiveness of these interventions, the paper's authors tested participants' support for several climate-related views, policies, and actions (e.g., "Climate change poses a serious threat to humanity," "I support raising carbon taxes on gas/fossil fuels/coal," participation in a tree-planting initiative).

Finally, the paper's authors gauged the desire of participants to share climate-mitigation information on [social media](#): "Did you know that removing meat and dairy for only two out of three meals per day could decrease food-related carbon emissions by 60%?" The data were collected between July 2022 and May 2023.

Overall, while responses varied significantly among geographic location and participants' demographics and beliefs, 86% recognized the dangers posed by climate change and more than 70% backed systemic/collective action addressing climate change.

"These responses reveal a global consensus regarding the dangers posed by climate change and the importance of enacting climate mitigation at the systemic level," observes Jay Van Bavel, a professor of psychology at NYU and one of the paper's authors. "It's important that people realize that there is an overwhelming global consensus on this issue."

However, there were notable differences among countries in response to the same messages or interventions. For example:

- Emphasizing [scientific consensus](#) on climate change (i.e., "99% of expert climate change scientists agree that the Earth is warming, and climate change is happening, mainly because of human activity.") increased support for climate-friendly policies by 9% in Romania, but decreased such support by 5% in Canada.
- Asking participants to write a letter to a socially close child, as a member of the future generation, had the following effects:
- The intervention increased climate policy support in the following countries: the United States (10%), Brazil (10%), Ghana (8%), Russia (7%), and Nigeria (5%).
- The intervention decreased policy support slightly in the UAE and Serbia (3%) as well as in India (2%).

Among participants who used social media, willingness to share climate change information on these platforms generally increased in response to all interventions tested. Notably, the largest gains occurred after participants read facts about the negative impacts of climate change—a "gloom and doom" style of messaging. After hearing these messages, participants were 12% more likely to share pro-environmental messages on social media.

Conversely, no intervention increased support for the tested action: a tree-planting initiative. In fact, some interventions decreased the likelihood of expressing willingness to undertake this individual-level action.

Taken together, the findings shed new light on the effectiveness of climate messaging. Some activists have argued in favor of a "doom-and-gloom" messaging style as a way to encourage action. Others, however, have said that such messaging may have no impact on behavior, or

worse, that it may depress and demoralize the public into inaction.

The new study offers support for both approaches—depending on the objective. While "doom and gloom" messaging was effective at stimulating sharing on social media, which the researchers acknowledge is a low-effort activity, it decreased support for tree-planting—a more labor-intensive task. Moreover, this messaging decreased policy support among study participants who were climate-change skeptics.

"Our results illuminate the impact of messaging aimed at achieving specific objectives," concludes Vlasceanu. "At the same time, these findings make clear that effective outreach depends on peoples' pre-existing belief in climate change, showing that policymakers and advocates need to tailor their outreach to the characteristics of their audience."

More information: Madalina Vlasceanu et al, Addressing Climate Change with Behavioral Science: A Global Intervention Tournament in 63 Countries, *Science Advances* (2024). [DOI: 10.1126/sciadv.adj5778](https://doi.org/10.1126/sciadv.adj5778). www.science.org/doi/10.1126/sciadv.adj5778

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