GMO, climate change skeptics change their minds after learning the facts, study shows

The use of information provision has been criticized as an ineffective way to increase support for evidence-based environmental policies, but it remains a dominant strategy among policy communicators.

Using a survey experiment on climate change and genetically modified food (GMO) policy preferences in Germany and the United States (N = 3,000 total), we investigate how information provision shapes environmental policy attitudes and whether this effect is moderated by trust in science and trust in the source of messages.

Findings show that information provision significantly shifted policy preferences towards the prevailing scientific opinion, but primarily among individuals whose prior attitudes conflicted with the scientific message.

While trust in GMO science moderated message effectiveness in the U.S., generally the effects did not depend on levels of trust in science or trust in the message source. Results are similar for both countries, suggesting that the findings could be relevant to different political contexts.

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Based on the Bayesian model of information processing and assuming weakly held attitudes about environmental issues, we expected that providing a message about the science of climate change and GMOs would change attitudes primarily among individuals whose priors conflicted with the message, and not among those whose attitudes already aligned with the message. We also expected that trust in climate or GMO science and trust in the source of scientific messages would moderate the effect of scientific information provision on environmental policy preferences. Our findings offer mixed support for these expectations.

As predicted by the Bayesian model, receiving a scientific message was associated with policy preferences more in line with the prevailing scientific opinion, primarily among individuals who had conflicting prior attitudes (skeptics). Participants whose attitudes towards climate change and GMO foods were already in line with the content of the message (believers) moved minimally, except for climate change believers in the U.S., whose policy attitudes were more in line with prevailing scientific opinion after receiving the message.

The consistency of our findings with the Bayesian model also suggests weakly held prior attitudes on climate change and GMO foods (although future research should test the strength of prior attitudes directly). These findings also offer some evidence of support for the information deficit model – providing scientific information can influence policy preferences more in line with the scientific consensus.

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Our findings have several implications for environmental policy communication. First, our findings suggest that scientific information provision can be effective at changing policy preferences, particularly among individuals with weakly-held prior attitudes that conflict with scientific consensus. This means that on these environmental issues, motivated reasoning does not seem to *completely* trump the information deficit and Bayesian models, as suggested in prior literature.

Additionally, we find that trust in science may not matter to information provision efforts as much as previously believed. Except for trust in GMO science in the United States, we find that prior trust in science does not seem to change how information is received and accepted.

Instead, we find that scientific communication can contribute to aligning mass public preferences with the prevailing scientific opinion, irrespective of prior trust in science or even the source of the message. As long as gaps remain between scientific and public opinion on environmental policy issues, environmental policy communicators will seek to use information provision to reduce this gap.

Read the original post (Behind paywall)