

Vegetarian and 'healthy' diets are more harmful to the environment

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Credit: Maliz Ong

Contrary to recent headlines—and a talk by actor Arnold Schwarzenegger at the United Nations Paris Climate Change Conference—eating a vegetarian diet could contribute to climate change.

In fact, according to new research from Carnegie Mellon University, following the USDA recommendations to consume more fruits, vegetables, dairy and seafood is more harmful to the environment because those foods have relatively high resource uses and greenhouse gas (GHG) [emissions](#) per calorie. Published in *Environment Systems and Decisions*, the study measured the changes in energy use, blue water footprint and GHG emissions associated with U.S. food consumption patterns.

"Eating lettuce is over three times worse in [greenhouse gas emissions](#) than eating bacon," said Paul Fischbeck, professor of social and decisions sciences and engineering and public policy. "Lots of common vegetables require more resources per calorie than you would think. Eggplant, celery and cucumbers look particularly bad when compared to pork or chicken."

Fischbeck, Michelle Tom, a Ph.D. student in civil and [environmental engineering](#), and Chris Hendrickson, the Hamerschlag University Professor of Civil and Environmental Engineering, studied the [food supply chain](#) to determine how the obesity epidemic in the U.S. is affecting the environment. Specifically, they examined how growing, processing and transporting food, food sales and service, and household storage and use take a toll on resources in the form of energy use, water use and GHG emissions.

On one hand, the results showed that getting our weight under control and eating fewer calories, has a positive effect on the environment and reduces energy use, water use and GHG emissions from the [food](#) supply chain by approximately 9 percent.

However, eating the recommended "healthier" foods—a mix of fruits, vegetables, dairy and seafood—increased the environmental impact in all three categories: Energy use went up by 38 percent, water use by 10

percent and GHG emissions by 6 percent.

"There's a complex relationship between diet and the environment," Tom said. "What is good for us health-wise isn't always what's best for the [environment](#). That's important for public officials to know and for them to be cognizant of these tradeoffs as they develop or continue to develop dietary guidelines in the future."

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Provided by Carnegie Mellon University

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