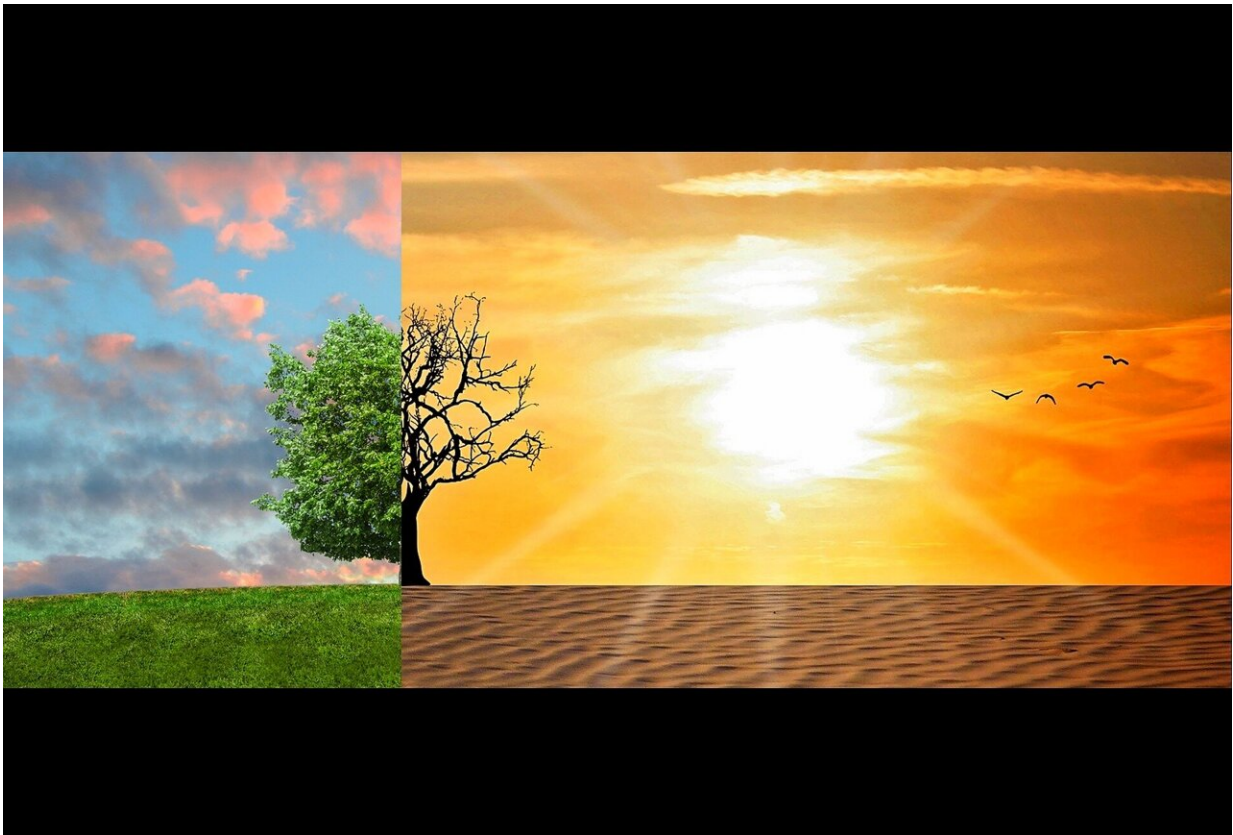


Literature review of farming and climate studies

April 6 2022, by David Bradley



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The understanding and response to the impact of climate change on agriculture will have repercussions for many years to come in terms of food security and the ongoing climate crisis itself. It is important that we

can assess and validate the studies taking place so that policymakers can be informed in a timely and useful manner. Within the European Union, for instance, there has been much effort put into assessing the impact of many studies. However, as is pointed out in the *International Journal of Sustainable Agricultural Management and Informatics*, impact assessment has always presented difficulties.

A research team from Greece presents a rapid literature review of studies into climate change and agricultural economics. Thomas Bournaris, Christina Moulogianni, and Ioannis Georgilas of the Aristotle University of Thessaloniki, and George Vlontzos of the University of Thessaly, Volos, Greece, carried out a two-stage analysis. In the first stage, they classified a decade's worth of studies published from 2010 to 2020 using pertinent criteria. In the second stage, they analyzed the methods used in those papers to assess the [impact of climate change](#) on agriculture.

Fundamentally, the team found that for this research period, researchers were mainly using mathematical modeling and scenario analysis as standalone methods or in combination with other methods. The use of a lot of different mathematical models, the team suggests, was helpful in the strategic analysis of the effects of climate change on [agricultural economics](#). Using mathematical modeling in combination with an understanding of multiple drivers allowed researchers to see details and trends in farming practices as they respond, or otherwise do not respond, to policy and climate change.

The team also showed that the density of studies did not change much during the period they examined, there were approximately 21 studies in each of the years. Authors represented some 66 nations across the globe although half of the authors were from the U.S. or the EU. A third finding revealed that the papers were published in journals covering the areas one would expect rather than there being lots of outliers in broader

or inappropriate journals. Most of the work was in journals covering agricultural and [biological sciences](#), environmental science, economics, econometrics and finance, and social sciences.

"The results of this literature review will provide useful information to the researchers that want to apply an impact assessment analysis for measuring impacts of [climate change](#) in agricultural economy," the team concludes.

More information: Bournaris, T., Moulogianni, C., Vlontzos, G. and Georgilas, I. (2021) Methodologies used to assess the impacts of climate change in agricultural economics: a rapid review, *Int. J. Sustainable Agricultural Management and Informatics*, Vol. 7, No. 4, pp.253-269.

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