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Assessing the financial impacts from drought and heat induced crop yield losses

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Climate variability and weather extremes can have large impacts on local crop production. Droughts and heat extremes have been identified as main drivers on crop yield variability and therefore might pose a threat to global food security under future emission scenarios. In addition, instability may arise from associated financial losses in countries in which the economy is heavily reliant on income from agricultural production.

Using latest ISIMIP3a/b data, we assess the relative importance of drought, soil moisture, mean temperature and extreme heat for regional crop variability and establish a simple statistical model for future crop yield projections under different climate futures and associated impacts on national economies.