

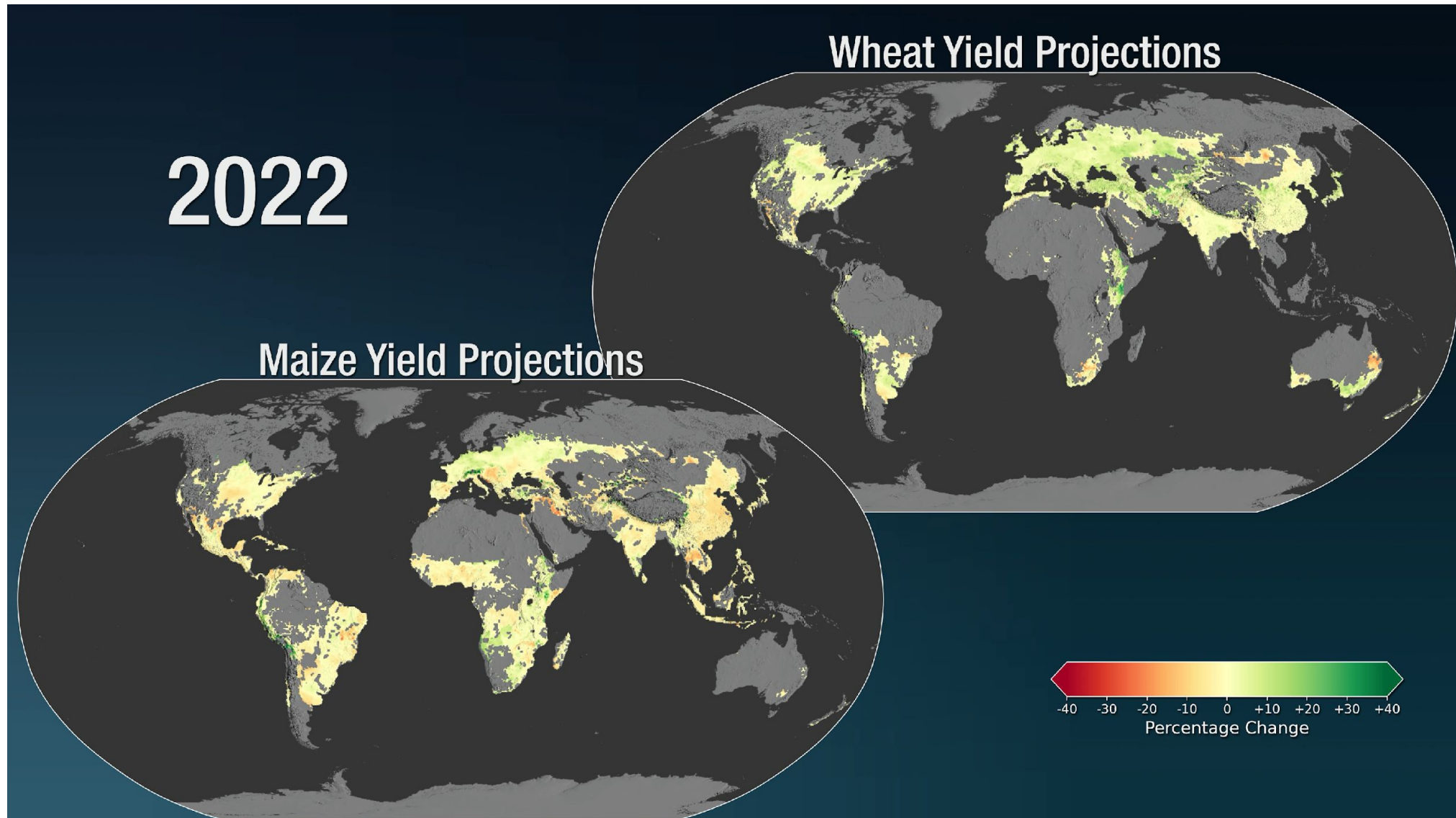
The fingerprint of climate change in crop losses during recent heatwaves and droughts

Jonas Jägermeyr

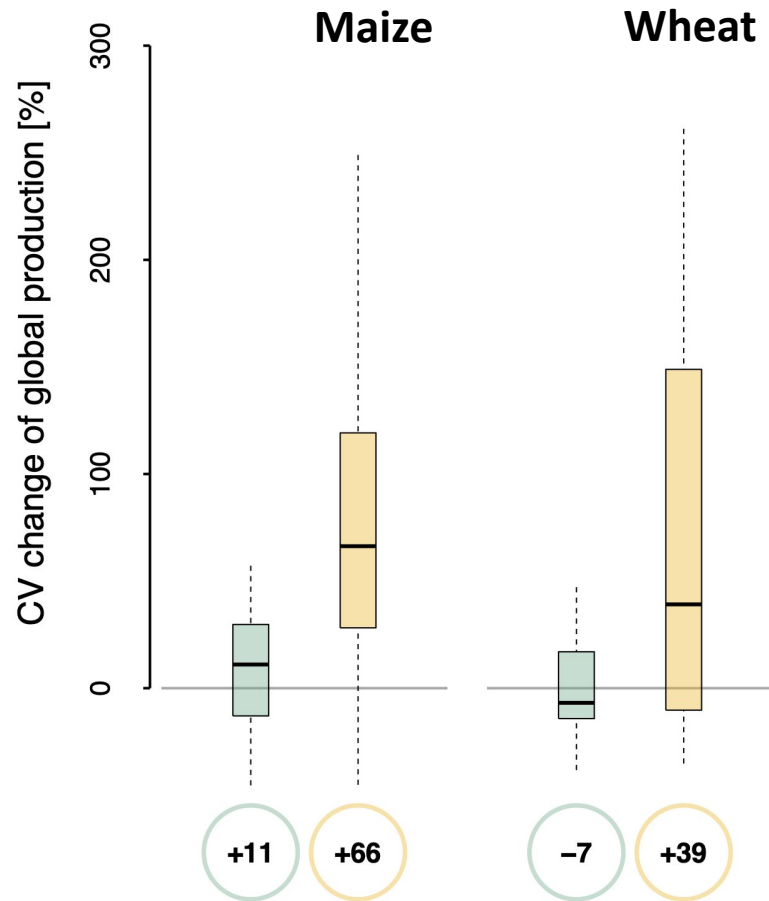
Columbia University, Climate School, New York
NASA Goddard Institute for Space Studies, New York



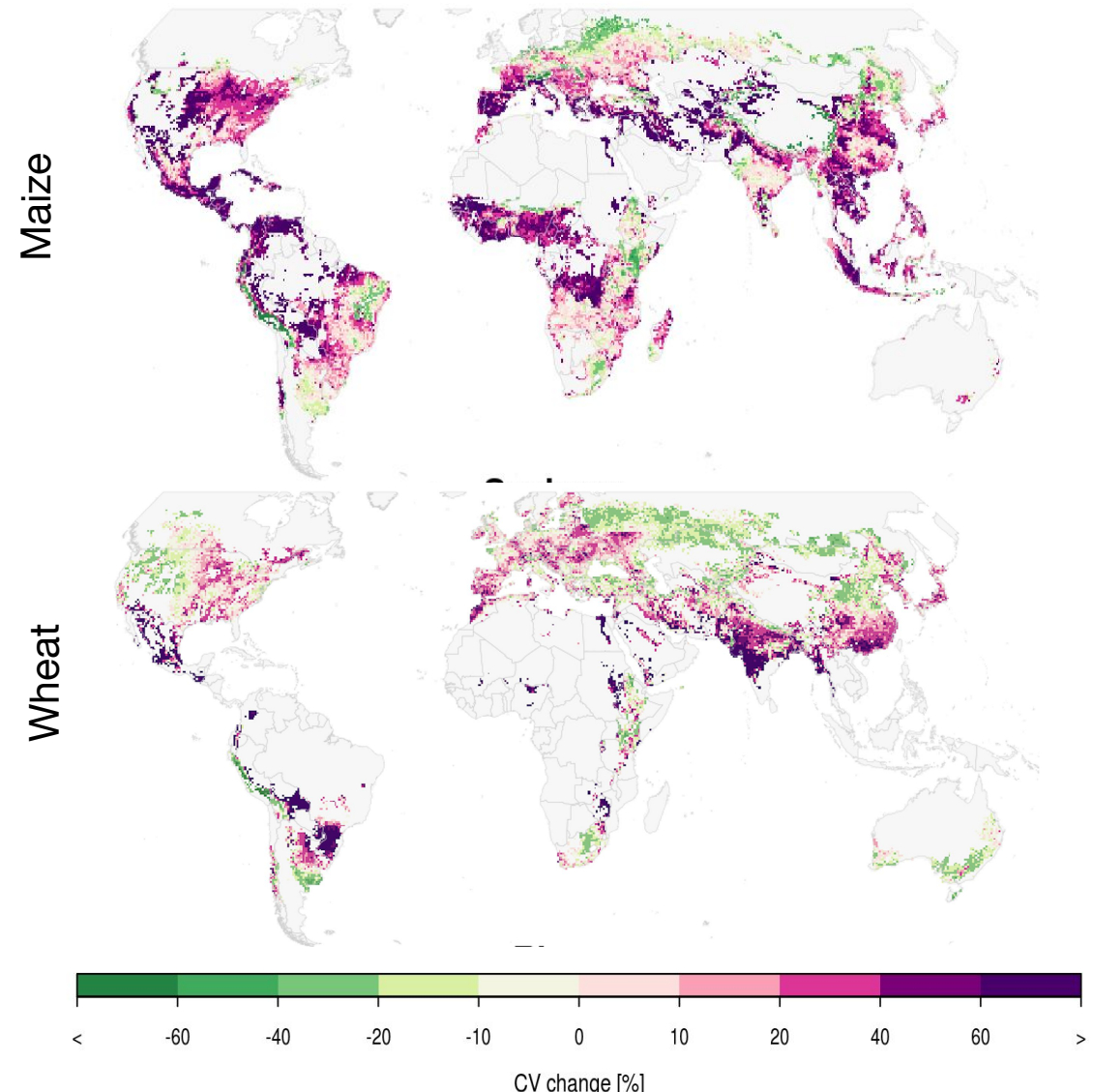
Crop yield projections under high-emission climate change

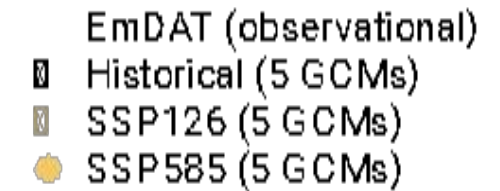
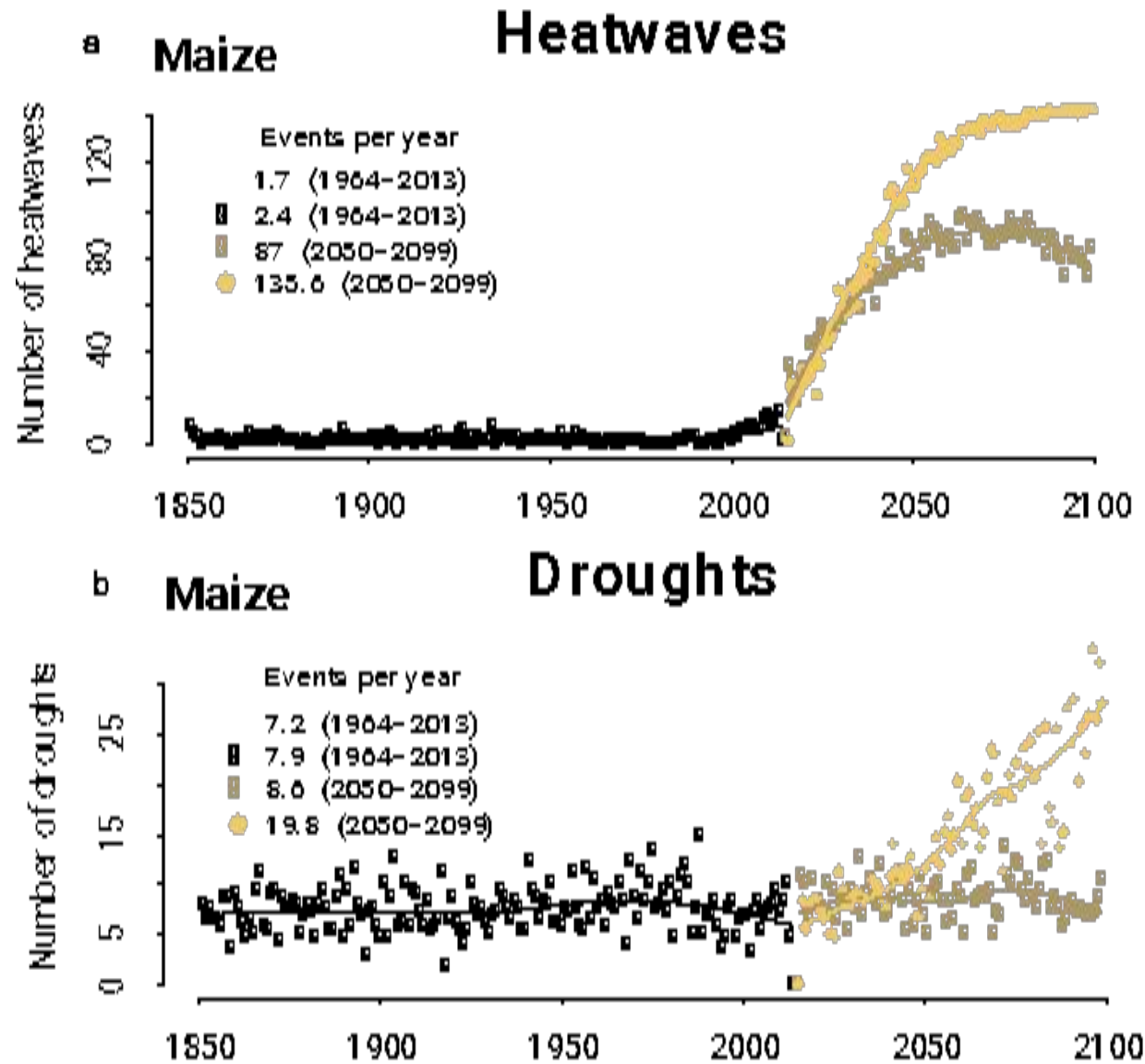


Increase of inter-annual variability

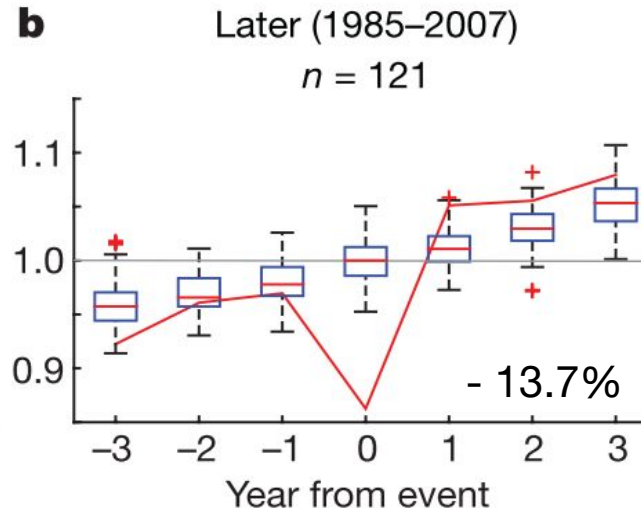
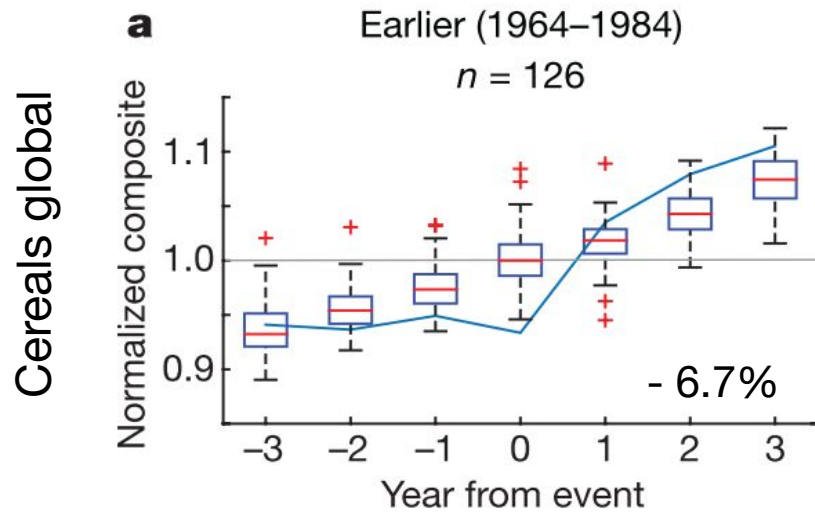


Change in Coefficient of Variation



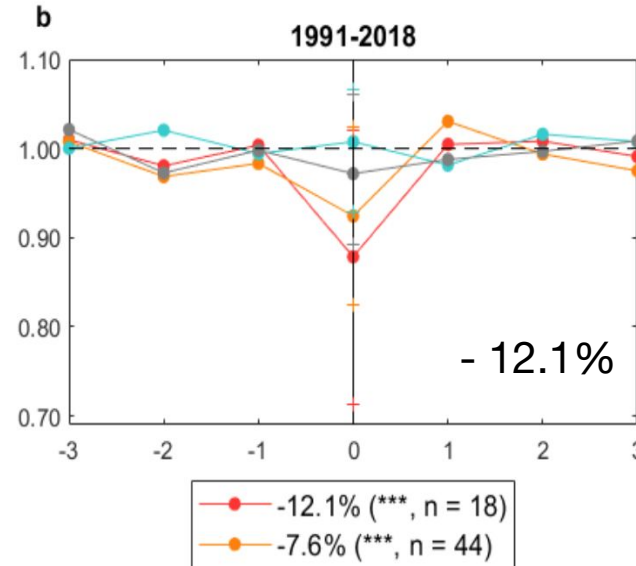
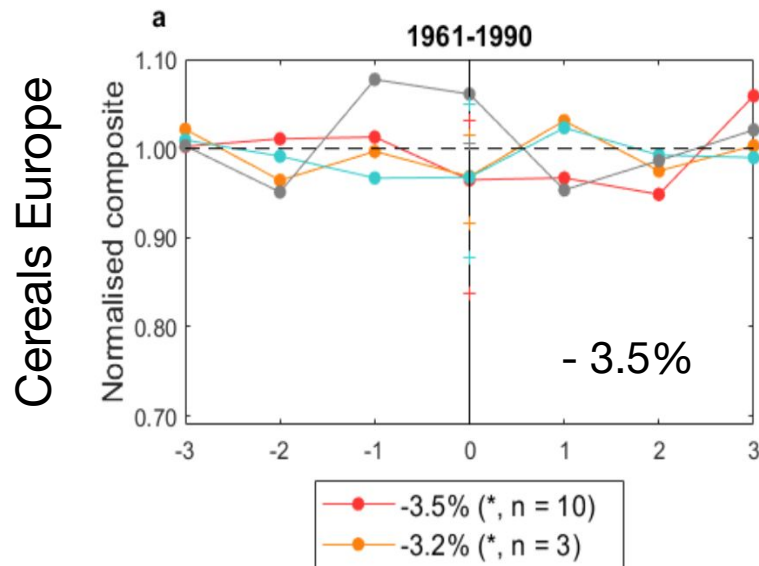


Crop impacts during extreme weather disasters increased over last 50 yrs



Lesk et al. 2016

Future



Bras & Jägermeyr 2021

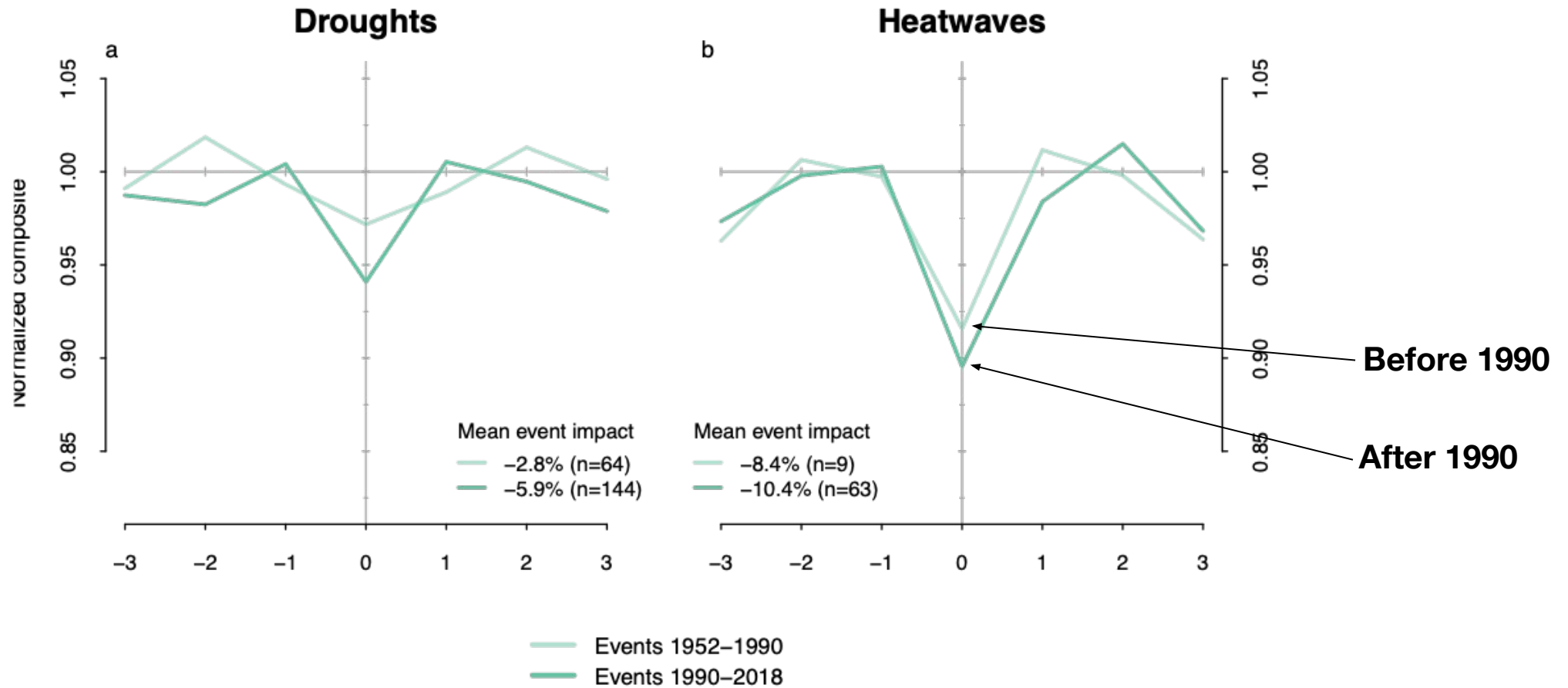
Future



Historical yield impacts of droughts and heat waves before and after 1990



Maize





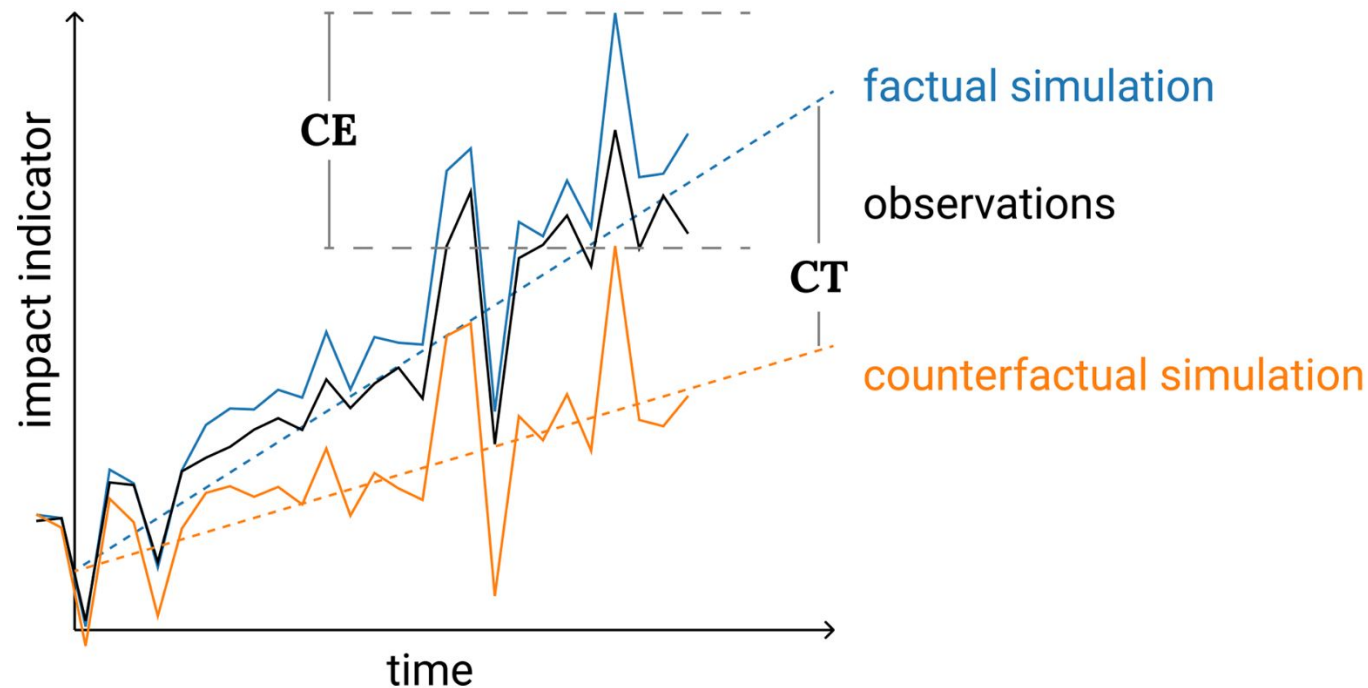
ATTRICI v1.1 – counterfactual climate for impact attribution

Matthias Mengel, Simon Treu, Stefan Lange, and Katja Frieler

Potsdam Institute for Climate Impact Research (PIK), Member of the Leibniz Association,
P.O. Box 60 12 03, 14412 Potsdam, Germany

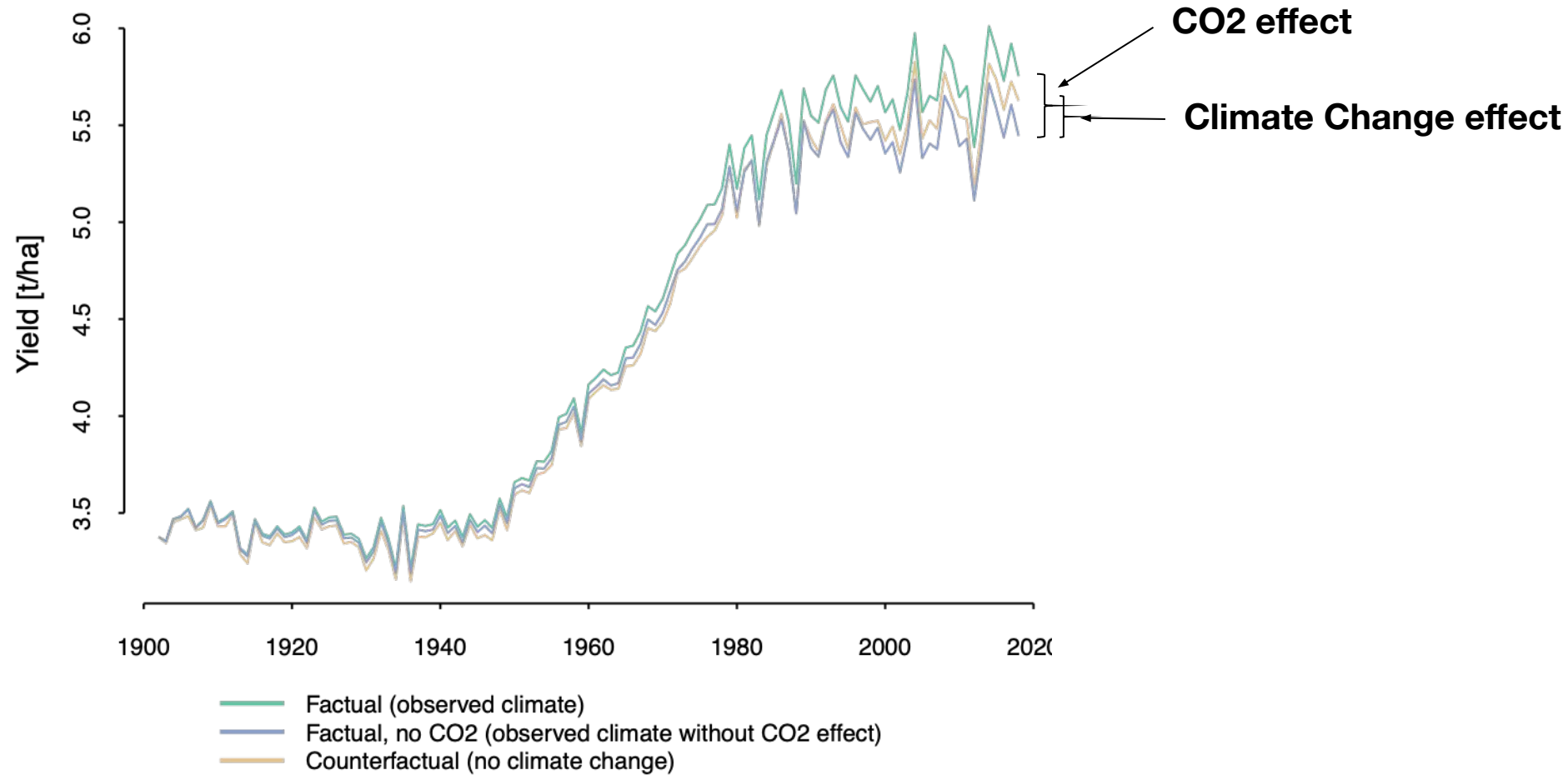
CE = contribution of climate change
to impact event magnitude

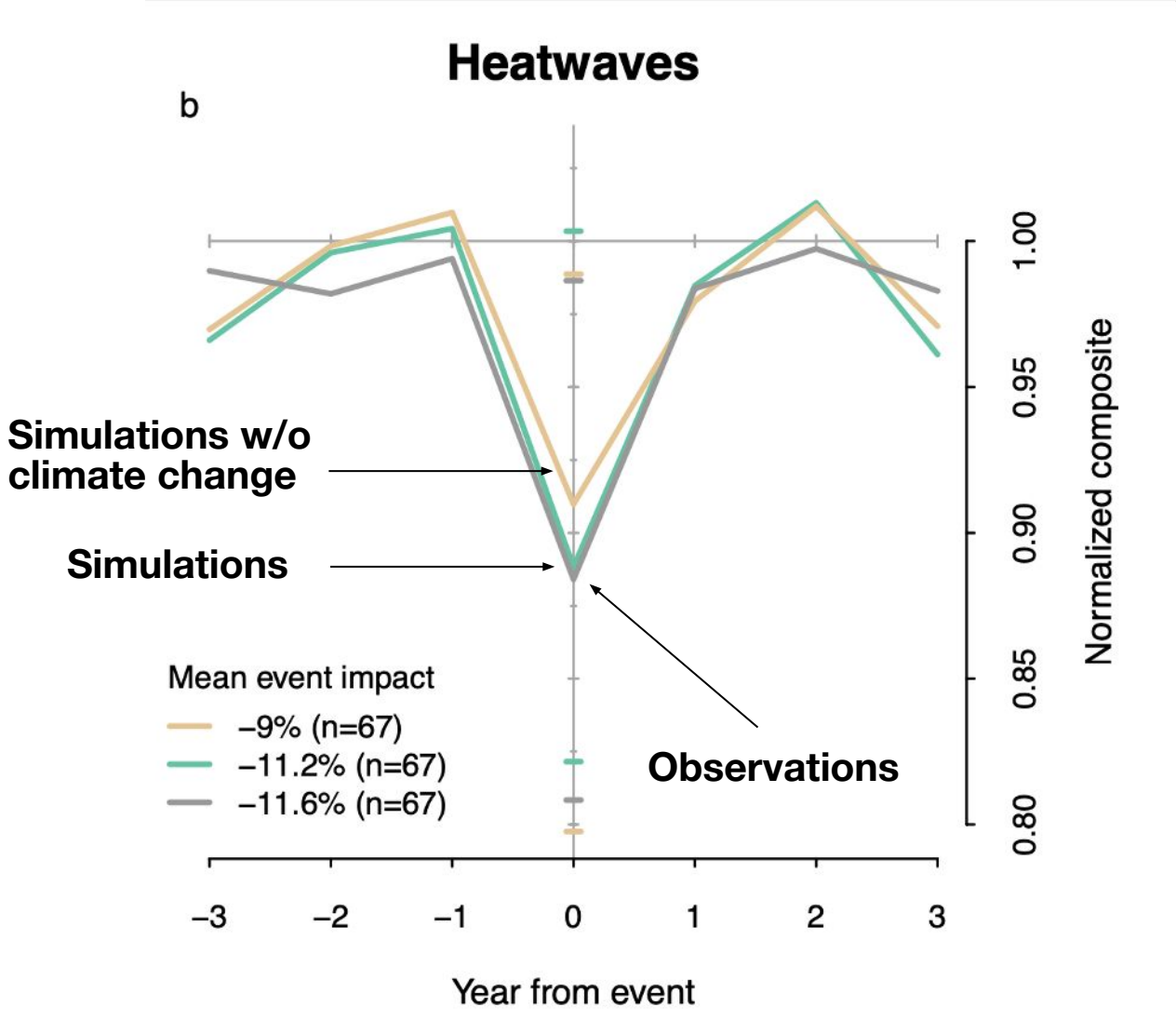
CT = contribution of climate change
to trend in impact



Simulated yield trends over the 20th century

Maize





Counterfactual
Factual

Thank you!

jonas.jaegermeyr@columbia.edu

@JonasJaegermeyr