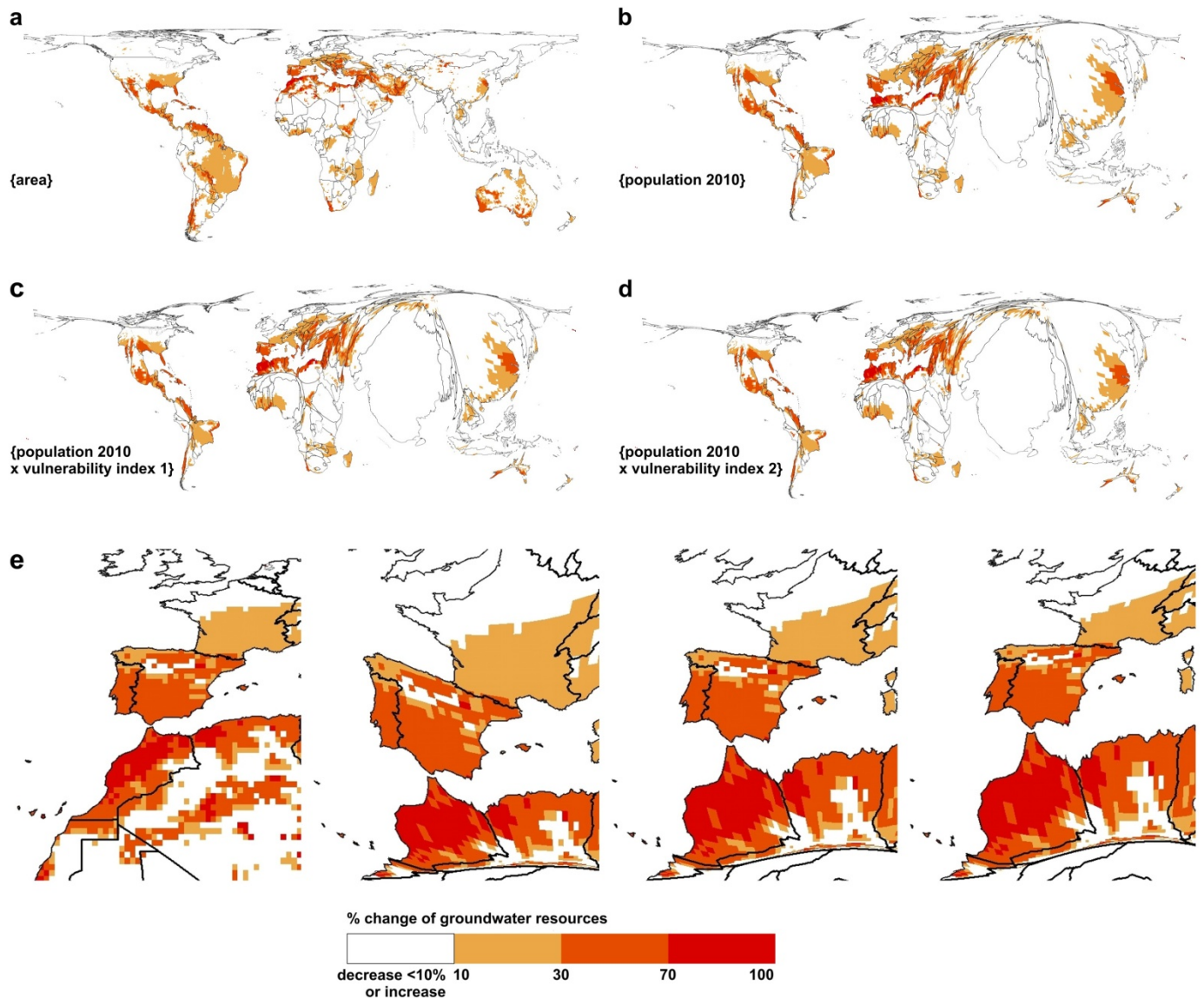


## Components of Climate Change Risk



Cartogram set “Components of risk”: visualizing risks of CC due to a decrease of renewable groundwater resources by bivariate cartograms. Distorter variables are indicated in curly brackets. Visualization of only the hazard, in color, by a global equal-area map (a), the hazard being a decrease of groundwater resources by more than 10% between the periods 1971–2000 and 2070–2099 (ensemble mean of percent changes calculated by WaterGAP driven by five bias-adjusted climate models under RCP8.5; Portmann et al., 2013).

Visualization of hazard and exposure, by distorting 0.5° grid cells according to their population in the year 2010 (b) and hazard, exposure, and vulnerability, by distorting grid cells according to the population 2010 times a vulnerability indicator (Döll, 2009) (c, d). In (c), the vulnerability index ranges between 1 and 5, while in (d), the same index is mapped onto the range between 1 and 21. Additionally, a zoom on western Europe and North Africa for the maps in (a)–(d) is provided in (e) (Döll 2017).

### References

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