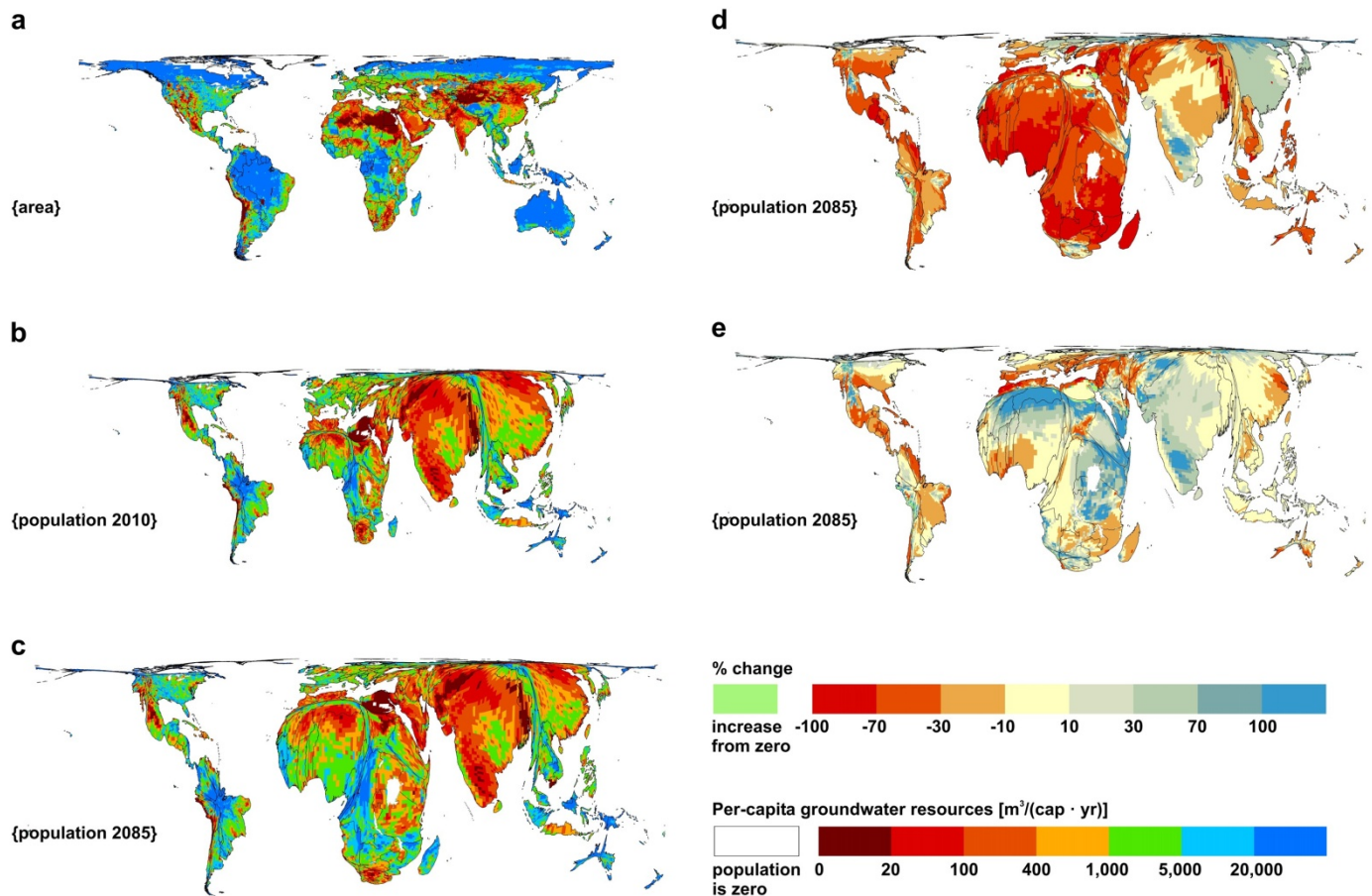


Natural Resources Under Stress



Cartogram set “Natural resources under stress”: visualizing current and future per-capita renewable groundwater resources as affected by CC and population growth. Distorter variables are indicated in curly brackets.

The left column shows per-capita groundwater resources, in $\text{m}^3/(\text{cap} \cdot \text{yr})$, under current conditions (1971–2000, population in 2010) by a global equal-area map (a), and by a gridded cartogram with population in 2010 as distorter (b), and per-capita groundwater resources under future conditions as affected by climate and population change (2070–2099, population in 2085), with population in 2085 as distorter (c).

The right column shows percent change of per-capita groundwater resources between current and future conditions due to both climate and population change (d), and due to CC only (e).

Cartograms (c), (d), and (e) use population in 2085 according to SSP 2 for computation of per-capita groundwater resources in 2085 as distorter, and the total land area is enlarged by 45% as compared to maps (a) and (b), proportional to the increase of world population from 6.9 to 9.9 billion. Groundwater resources as computed by WaterGAP driven by five bias-adjusted climate models, high emissions scenario RCP 8.5 (Portmann et al., 2013). (Döll 2017)

References

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