



Avoiding widespread drought

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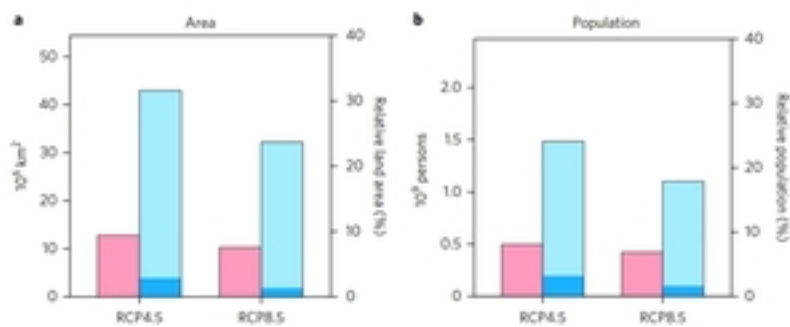
Topics: Climate Change & Energy | Drinking Water | Water & Development

The earth's water supply is changing because of global warming: the ratio of precipitation to evaporation is sinking, and additional arid zones may emerge. The speed at which this development is likely to take place has been analysed by an international team including Eawag researchers.

Their calculations are derived from 27 climate models and two scenarios of the development of greenhouse gas concentrations in the atmosphere. The results show that 30% of the earth's land surface and around one fifth of the population will suffer from drought even before the global temperature has increased by 2°C. If, on the other hand, global warming remains stays within an additional 1.5°C compared to pre-industrial levels, two thirds of these areas will not dry out and fewer than 10% of the population will suffer from the results of drought. These results make it clear just how vital it is that measures are taken to limit global warming to under 1.5°C.

Original publication

Park, C. E., Jeong, S. J., Joshi, M., Osborn, T. J., Ho, C. H., Piao, S., Feng, S. (2018). Keeping global warming within 1.5°C constrains emergence of aridification. *Nature Climate Change*, 8(1), 70-74. <http://doi.org/10.1038/s41558-017-0034-4>



Land surface affected by drought (graph a, left) and population based on present-day population figures (graph b, right). Light red represents the scenario for a warming of 1.5 °C, and light blue a 2 °C warming. RCP 4.5 and RCP 8.5 are the scenarios for greenhouse gas concentrations.

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<https://www.eawag.ch/en/info/portal/news/news-archive/archive-detail/avoiding-widespread-drought>