## Projected temperature impacts to evaporative demand in the African Sahel and India

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In a warming world, changes to atmospheric evaporative demand may be a decisive component of challenges for crop production and water resource management. Knowledge of future spatial patterns and intensity of changes could help guide regional climate change adaptation strategies. Of the climate variables used in concert to estimate evaporative demand, or potential evapotranspiration (PET), changes to air temperature are projected with highest confidence. Therefore, we focus upon the ability of recent temperature observations to explain intraseasonal variations in PET. We employ 2001-2010 daily data at 0.25 degree spatial resolution from the GLDAS Noah 2.7.1 Land Surface Model and the FAO-56 Penman-Monteith formulation for reference evapotranspiration. Strong statistical relationships between air temperature and PET were observed during the major cropping season in the African Sahel and India. Using the robust links observed within these regions and IPCC AR4 temperature projections we project changes to June-September atmospheric water demand to 2050.