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The impacts of climate change on irrigation demand of major crops in China (Outstanding Young Scientist Lecture)

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The past decades has witnessed severe environmental degradation caused by unsustainable water supply in China. One may wonder whether climate change will have a far-reaching impact on China's future water demand, particularly irrigation water demand. In this paper, a GIS-based Environmental Policy Integrated Climate (GEPIC) model was used to study the impacts of climate change on irrigation demand of major crops in China with a spatial resolution of 30 arc-minutes. We conclude that climate change will lead to much higher irrigation demand. This trend will impose higher pressures on China's irrigation water supply. Effective adoption and mitigation measures have to be taken in the future to mitigate the adverse effects of climate change on irrigation demand.