

EGU2020-15701

<https://doi.org/10.5194/egusphere-egu2020-15701>

EGU General Assembly 2020

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Analysis of Rice Yield in CHINA by Climate Change using Deep Neural Network

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Climate change is an important factor in crop growth, and it is significant to understand the relationship between climate change and rice yield. This study used annual rice yield from the USDA(United States Department of Agriculture) for each of China's 16 administrative regions from 1979 to 2009, as well as average climate data from July to August, which were meteorological observations collected from the CRU(Climat Research Unit). The relationship between selected rice yield and climate change was nonlinear and modelled using a deep neural network to train even rows and verify odd rows of data. This study is expected to contribute to better food self-sufficiency and forecast future grain yields in China.