Evaluation of a multi-site weather generator in simulating precipitation in the Qiantang River Basin, East China

多站天气发生器在中国东部钱塘江流域降雨模拟的评估

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Main goal

Evaluate the performance of GiST in simulating precipitation and future changes in precipitation under RCP 8.5 and Hadgem2_ES in the Qiantang River Basin, East China

Main method

Geo-spatial temporal weather generator (GiST), change factor method CMIP5

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Main results

The multi-site weather generator GIST can model the spatialcorrelations of precipitation appropriately.

The results of this study can be used for hydrological modeling or providing implications for water resources management and extreme event risk assessment.

GiST can be applied to investigation of the impact of climate change on hydrology and water resources.

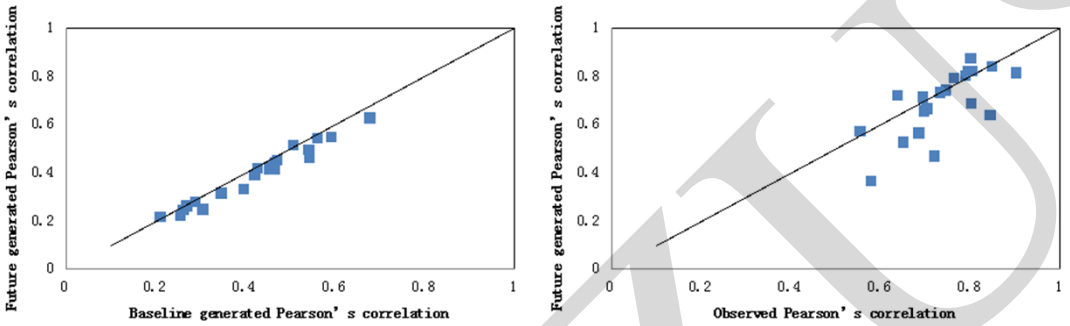


Fig. 6 Pearson's correlations of daily precipitation and monthly precipitation in the future period

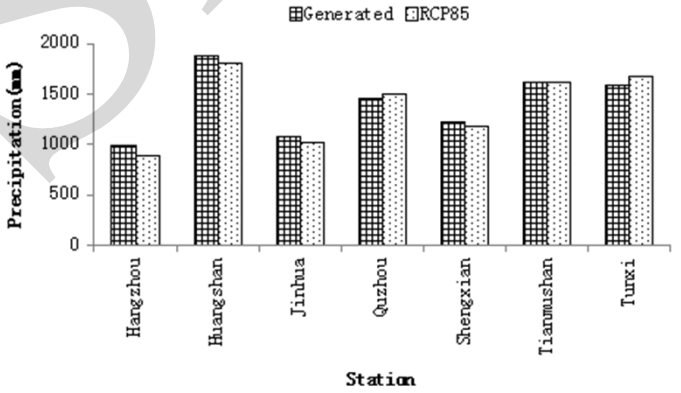


Fig. 7 Future and baseline generated annual precipitation amount

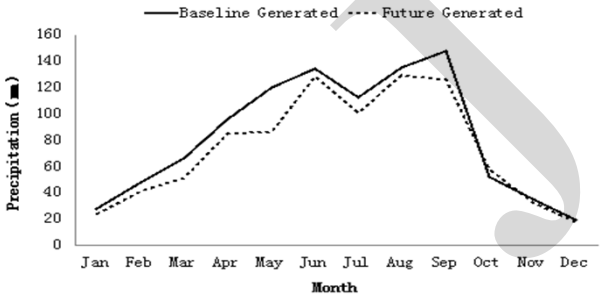


Fig.8 (a) Comparison of baseline and future generated monthly precipitation amounts at Hangzhou

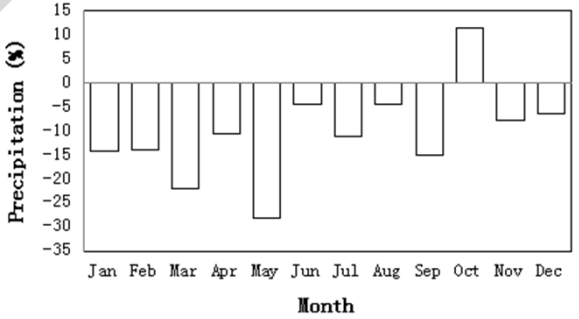


Fig.10 (a) Relative changes of monthly precipitationin 2071–2100 for Hadgem2_ES under RCP 8.5 at (a) Hangzhou

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