Supplemental Information for

Impacts of climate change on water resources in the major countries along the Belt and Road

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The Nash coefficient, used to evaluate the performance of the model, was calculated by the following formula:

$$Nash=1- \frac{\sum\_{i=1}^{n}( y\_{i,obs}-y\_{i,sim})^{2}}{\sum\_{i=1}^{n}( y\_{i,obs}-\overbar{y\_{obs}})^{2}}$$

Where $y\_{i,obs}$ is the ensembled runoff data from GCM at coarse spatial resolution around 2° (*Table 1*), $\overbar{y\_{obs}}$ is the mean value of total coarse runoff data and $y\_{i,sim}$ is the downscaled result by random forest model at the spatial resolution of 0.1°.