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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Assessing water supply capacity in a complex river basin under climate change using the logistic eco-engineering decision scaling framework" *by* Daeha Kim et al.

Anonymous Referee #1

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"Assessing water supply capacity in a complex river basin under Climate change using the logistic eco-engineering decision scaling Framework" Authors: Daeha Kim, Jong Ahn Chun, Si-Jung Choi Journal: Hydrology and Earth System Sciences (HESS) Recommendation: Minor Comment

General Comments: This paper has integrated the logistic regressions with the eco-engineering decision scaling framework to evaluate the risk of system failures in contrast to expected performance under dynamic climate change scenarios. This paper contains new insights and contains a lot of information for scientific community. However, the authors have explained the manuscript in complicated ways which I think

could be explained in a simplified manner therefore, the authors are advised to avoid using complex English sentences and try to make their next manuscript as simple as possible which would ultimately increase understanding as well as attract more readers. In a nutshell, the results of this paper are convincing enough to support the basic objective and stance of this paper in its current version. Therefore, after a minor revision, this paper can be given a green signal to be published in journal 'Hydrology and Earth System Sciences (HESS)". Minor Comments: 1. The authors have used 25 GCMs in current study and all of them have different spatial resolution which has a lot of implications in results section. Therefore the authors are advised to explain how the spatial resolution of all those GCMs are made consistent with each other. 2. Page6 Line13: In current study, only high demand scenario has been chosen from a conservative perspective whereas the low demand scenarios has been discarded with the justification of declining rice-planting lands. However the authors did not provide any reference which supports author assumption of declining rice-planting lands. 3. Page6 Line11: Authors are suggested to please explain how they calculated economic growth and effectiveness so that it could be easy for readers to comprehend. 4. Page8 Line27: The line "The four free parameters of GR4J. . ..inputs" is confusing and needs to be rephrased. Four free parameters has not been defined yet, therefore, to make it convenient for reader, please first define the four free parameters before above-mentioned line. 5. Page14 Line14: Please rephrase "more water resources need be transferred" with "more water resources need to be transferred" 6. Page16 Line9: In line "More reliable risk estimates can be achieved from other uncertainty assessment methods though expensive efforts may be required" Please mention few other uncertainty assessment methods you are talking about so that it could be easy for readers to comprehend the context. 7. Page24 Figure 1: The annotation color in inset maps needs to be changed because its not clear enough.

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