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Potential Impact of Climate Change on Suspended Sediment Changes in Mekong River Basin

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Abstract : This paper evaluates the impact of climate change on suspended sediment changes in the Mekong River Basin. In this study, the distributed process-based sediment transport model is used to examine the potential impact of future climate on suspended sediment dynamic changes in the Mekong River Basin. To this end, climate scenarios from two General Circulation Model (GCMs) were considered in the scenario analysis. The simulation results show that the sediment load and concentration shows 0.64% to 69% increase in the near future (2041-2050) and 2.5% to 95% in the far future (2090- 2099). As the projected climate change impact on sediment varies remarkably between the different climate models, the uncertainty should be taken into account in sediment management. Overall, the changes in sediment load and concentration can have a great implication for related sediment management.

Keywords : climate change, suspended sediment, Mekong River Basin, GCMs
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