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Exploring water-poverty dynamics through sensitivity analysis in coastal Bangladesh

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Despite an increasing focus on the role of water in influencing human well-being and poverty in an effort to meet the Sustainable Development Goals, the relationship between water and poverty remains poorly understood. Through an integrated biophysical and socioeconomic model of the Ganges-Brahmaputra-Meghna Delta, this work applies global sensitivity analysis to better understand the key biophysical drivers of human wellbeing as well as current capacity in representing such complex systems in a quantitative modelling environment. Application of sensitivity analysis in this context provides a novel approach to exploring the multi-dimensional nature of poverty as it relates to water, operating at different scales. The research forms part of a wider programme (REACH – Improving Water Security for the Poor) aimed at informing investment decision in coastal Bangladesh.