



Creating and Mapping Flash Flood Social and Physical Vulnerability Index of Riyadh, Saudi Arabia

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Over the past couple of years, the frequency and magnitude of flash floods are increasing in the Kingdom of Saudi Arabia. For effective planning and mitigation purposes, it is necessary to identify and visualize areas that are vulnerable to the flooding. In this paper, we will first create a flash flood social and physical vulnerability index for the city of Riyadh based on physical and social-economic data. Building upon the index, the areas of Riyadh that are highly vulnerable to flash floods will be identified and mapped using Geographic Information Systems (GIS). Finally, possible mitigation measures that can be used to reduce the impacts of flooding will be discussed in details.