

Development of a flood warning system for shire river basin in Malawi
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This study looks at the development of a flood warning system for the Shire River Basin using hydrological models. It is envisaged that the results of the study will assist the Malawi Government in developing sound plans for averting flood disasters in the Basin, and to produce flood-zoning maps. The upper Shire catchment and the Ruo catchment, hydrological models were used in the development of the rainfall runoff models. These models were utilised to fill the missing data in the observed discharge at Chikwawa and Sinoya gauging stations. The inverse squared distance method was applied to fill the missing rainfall data. The hydrological channel routing model was applied to route discharges from Chikwawa and Sinoya gauging stations to Chiromo gauging station. The lead forecasts of up to 6 days were performed at Chiromo to check the accuracy of the model. These lead forecasts gave satisfactory results. Model results indicate that flood warning is going to be issued depending on the prevailing weather and river flow conditions, forecasted weather conditions and the lead forecasts made using the flow data from the gauging stations.