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Seasonal forecasts of the SINTEX-F coupled model applied to maize yield and streamflow estimates over north-eastern South Africa

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ABSTRACT

Forecasts of a Global Coupled Model for austral summer with a 1 month lead are downscaled to end-of season maize yields and accumulated streamflow over the Limpopo Province and adjacent districts in northeastern South Africa through application of an MOS (Model Output Statistics) approach applied over a 28 year period. Promising results, based on the hindcasts of the Global Models and historically observed yield and streamflow data, suggest potential for a commodity-orientated forecast system for application in agriculture in an operational environment. It also serves as a baseline study for inclusion of sophisticated crop or runoff models using GCM output data towards estimating potential yields and streamflows in the region.