

**Moist convection and cold pool outflows in weather, climate and the Earth System:
The West African Monsoon**

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Abstract

Deep moist convection forms an integral part of the atmospheric circulation and couples smaller scale cloud processes with larger-scale flows. This is especially apparent in the tropics, where our ability to predict atmospheric convection limits our predictions of weather, climate and the earth system. The talk will focus on examples from the region of the West African monsoon, where in summer organised deep convective systems bring the annual rainfall to millions, using examples from across weather, climate and the earth system. The talk will in particular highlight the role played by the cold pool outflows from convection in this environment, from studies using observations and convection-permitting models. The talk will conclude with a brief review of related ongoing work using similar tools in other tropical regions.