

EGU22-13520

<https://doi.org/10.5194/egusphere-egu22-13520>

EGU General Assembly 2022

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## Representation of Low-Level Clouds in West Central Africa in a convection-permitting regional climate simulation

Olivier Champagne<sup>1</sup>, Vincent Moron<sup>2</sup>, Nathalie Philippon<sup>1</sup>, and Cornelia Klein<sup>3</sup>

<sup>1</sup>Institut des Geosciences de l'Environnement, Université Grenoble Alpes, Saint-Martin d'Hères, France

<sup>2</sup>Aix-Marseille University, CNRS, IRD, INRAE, Collège de France CEREGE, Aix-en-Provence, France

<sup>3</sup>UK Centre for Ecology and Hydrology, Wallingford, UK

The region of Western Central Africa (WCA) is covered by a large deck of stratocumulus or stratus during the long dry season (June-September). These low clouds are an important component to sustain the Gabonese and Congolese forests, but they are not properly simulated by global climate models. The Pan-African convection-permitting decadal regional climate simulation (4 km resolution), conducted with the Met-office unified model (CP4-Africa), has so far facilitated great advances in scientific understanding on characteristics of organised deep-convection in the climate change context. However, it remains unclear whether there may also be added value in the simulation of extensive low-level clouds. Here, we concentrate on the CP4 historical period (1997-2006) and evaluate its representation of low clouds in WCA. We will present preliminary results on the ability of CP4 to simulate the diurnal and seasonal evolution of low clouds in WCA compared to in-situ observations, ERA5 reanalyses and the non-convection-permitting regional simulation (R25). R25 was run with a similar setup and global driving data as CP4, but using a convective parametrization, thus allowing direct attribution of simulation differences to resolution and the representation of convection. This work is relevant for our understanding of the processes responsible for the development and persistence of low clouds in WCA. Our results may also be used to assess whether future projections at km-scale such as from CP4 can provide more plausible depictions of low cloud changes.