Project: **961** Project title: **BINGO** Principal investigator: **Uwe Ulbrich** Report period: **2020-01-01 to 2020-12-31**

Our proposed work for 2020 was focused solely on further analyses of existing project data, rather than additional simulations. Our analyses are of extreme precipitation in convection-permitting models and in regional climate models of lower resolution (parametrized convection), both in terms of their present-climate representation and future changes. We had expected to finish all of these analyses during 2020, but this prediction has proven to be overly ambitious. Due to some delays associated with time constraints, and the work taking longer than expected, we are still using the BINGO data for analysis and also have a paper still working its way through the review process. For one of our papers, we also ended up having to perform additional sensitivity simulations during 2020 (hence the higher than expected computing resources used during 2020).

Our work has nevertheless so far resulted in two papers during 2020, one of which has been published [1] and the other which has not yet been accepted [2]. A full list of publications originating from the entire BINGO project, including many using data produced by the FU Berlin at the DKRZ, can be found at the BINGO website <u>http://www.projectbingo.eu/content/publications</u>.

[1] Meredith, E. P., Ulbrich, U. & Rust, H. W, Subhourly rainfall in a convection-permitting model. Environ. Res. Lett. 15, 034031, DOI: 10.1088/1748-9326/ab6787, 2020.

[2] Meredith, E. P., Ulbrich, U., Rust, H. W. and Truhetz, H. Present and future diurnal hourly precipitation in 0.11° EURO-CORDEX models and at convection-permitting resolution, (submitted to Nature Scientific Reports).