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## Application of the complete CORINE land covers for modelling in WRF model

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Land use information is crucial in weather modelling as it determines the energy partitioning of the land surface. Based on the partitioning heating of near surface air and moisture supply of the planetary boundary layer is determined. These processes affect the general calculation of temperature, but it also has substantial effect on precipitation formation, especially on convective precipitation.

In this study the CORINE 44 categories are integrated into the WRF model. Usually the 44 land cover types are recategorized into a standard USGS or MODIS land use types. Here we present a dataset and application with the complete integration of the 44 types.

One-year runs are created with the CORINE land cover compared to the standard USGS dataset. Along with the new land cover types vegetation parameters had be defined as well. Four runs refer to a USGS-reference, CORINE2USGS converted, CORINE-USGS parameter, CORINE-newparameters where the effect of land cover and parameter change is analyzed. The modelled area covers the whole European region with 50 km resolution using the WRF 4.2 model. Regionally, on a monthly average 5-30% difference in precipitation and around 1 °C differences occur.

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