



Towards climate simulations with ICON-EUclim

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ICON-EU has now been running at DWD for more than one year, replacing the former model COSMO-EU for which the operational routine is/was finally stopped in December 2016. The ICON-EU subdomain has an effective horizontal resolution of about 7 km (icosahedral grid of R3B8 in ICON notation). It is online coupled with the global ICON model (running with about 13 km) via two-way-nesting. The numerical weather prediction (NWP) version of ICON is also used by a growing community. Different configurations are applied, including limited-area, convection-permitting and LES setups.

The ICON model with the ECHAM physics package including a coupled ocean and marine biogeochemistry model will once replace the Earth System Model (ESM) of Max-Planck Institut für Meteorologie (MPI) as MPI-ESM2. However, it is not yet as flexible as the NWP version of ICON. For example, local grid refinement as applied in ICON-EU is not yet implemented or tested. Within the BMBF-funded project CMIP6-DICAD, we plan to perform for the first time ICON simulations with ECHAM physics on a global scale with online coupled subdomains. The effective horizontal resolution of the innermost subdomain is planned to be 10 – 20 km.