

## Projection of the late-21st century (2071-2100) Climate Changes over Korean Peninsula Based on the 4 RCP Scenarios Using RegCM4

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In this study, we analyzed the simulation skills of RegCM4 for the temperature and precipitation over South Korea for the 30-year period(1981-2010) and projected the late 21st century (2071-2100) climate change, based on RCP (Representative Concentration Pathway) scenarios(2.6, 4.5, 6.0, 8.5). The HadGEM2-AO data provided by the National Institute of Meteorological Research were used as the lateral boundary conditions for the RegCM4 with 12.5 km of horizontal resolution. In general, the RegCM4 well simulated the temporal and spatial variations of temperature and precipitation compared with CRU(Climate Research Unit) data. However, the RegCM4's simulation skills are clearly dependant on the seasons and geographic locations. The RegCM4 well simulated daily variation of observed precipitation from June to mid-July before the full activation of the Changma front(bias: -1.09 mm/day, Corr.: 0.84). The results of projected mean/extreme climate changes over South Korea will be discussed in the presentation.

- ※ keyword: RegCM4, HadGEM2-AO, RCP scenarios, South Korea, future climate change
- ※ Funding Institution & Project title: Korea Meteorological Administration, CATER 2012-2081 project
- ※ Oral/Poster Presentation: Oral Presentation **Poster Presentation**