



Projection of sea-level change at twenty-first century from HadGEM2-AO

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Increases of carbon dioxide concentration in atmosphere has not only raised the global mean temperature but also caused ocean warming. Rising sea level caused by ocean warming will have a negative impact on the lives of millions of people living in coastal zones. The Korean peninsula is surrounded by the sea on three sides, and there are many people living in coastal region. Main reasons to sea-level change are the addition of mass through land ice melt and the thermal expansion of the ocean water (Bindoff et al., 2007). The land ice contribution consists of mass loss from the two large ice sheets (Greenland and Antarctica) and the glaciers (Slangen and van de Wal, 2011). This study has developed to project sea level change at the end of twenty-first century from HadGEM2-AO with reference to Slangen et al., (2014). Especially, this study reports the sea level change by mass loss of ice sheets and glaciers. At the end of 21st century, sea level changes by surface mass balance of Greenland and Antarctica, are projected to 0.045, -0.053 m, respectively. sea level change as glaciers is projected to 0.145 m. These values are smaller than AR5 data (0.073, -0.037, and 0.155 m) but are in the range of uncertainty (Greenland: 0.03 - 0.74, Antarctica: -0.07 - -0.013 and Glacires: 0.089 - 0.228).