



Greenland at 5km resolution during the 21st century as seen by the HIRHAM5 regional climate model

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The demand for information on climate projections for the Arctic regions is rapidly growing. It is also a challenge to convert the data produced by climate models into information suited for climate change impact studies. For this reason, we have extracted a large number of climate indices from five time slice downscaling experiments performed for the Greenland region. These experiments include a control period 1991-2010 run and two scenario periods (2031-2050 and 2081-2100) runs for the emission scenarios RCP 4.5 and RCP 8.5 respectively. The downscaling is done, using the DMI HIRHAM5 regional climate model, for the EC-EARTH global climate model at a 5km horizontal resolution. The results show clear differences for a number of indices for the two emission scenarios but also for the two scenario periods within the two emission scenarios. The indices presented include a permafrost index, fishing index, amount of snowfall, days with daily maximum temperature > 10°C, daynumber of last spring frost, length of growing season and number of days with snow cover.