Sector	No. glaciers	2000-2010 mean sector	Largest glacier by ice	Largest glacier 2000-2010
		ice flux (Gt/yr)	flux	mean ice flux (Gt/yr)
SE	47	139.0	Helheim	25.7
SW	9	17.6	Kangiata Nunata Sermia	5.8
CE	23	59.3	Kangerdlugssuaq	28.8
CW	18	91.5	Jakobshavn	42.7
NE	25	22.4	Daugaard-Jensen	9.3
NW	60	95.2	Kong Oscar	8.4
NO	12	16.0	Humboldt	3.8

**Table S1.** Statistics of tidewater glaciers in each sector, which play an important role in sector-by-sector retreat projections. Note that the largest glacier by ice flux excludes glaciers with floating ice tongues.



**Figure S1.** June-July-August (JJA) runoff biases for the glacier with the largest 2000-2010 ice flux per sector (excepting glaciers with permanent ice shelves). A positive value indicates that MAR forced by the CMIP5 AOGCM simulates more runoff over the period 1995-2014 than RACMO2.3p2 forced by ERA-Interim. For example, at Helheim Glacier in SE Greenland, the JJA runoff from MAR forced by MIROC5 RCP8.5 is 55 m<sup>3</sup>s<sup>-1</sup> larger than RACMO2.3p2 forced by ERA-Interim over the period 1995-2014, as illustrated in Fig. 2c of the main article.



**Figure S2.** Thermal forcing biases per ice ocean sector for each CMIP AOGCM. A positive value indicates that the CMIP AOGCM is warmer than the observations (EN4) over the 1995-2014 period. For example, for MIROC5 RCP8.5, the SE region is  $1.4^{\circ}$ C warmer than EN4, as illustrated in Fig. 3c of the main article.



**Figure S3.** Evolution of JJA runoff in all models and sectors, grouped by CMIP5 AOGCM. Each plot shows a CMIP5 AOGCM, while the colors on each plot differentiate the ice-ocean sectors. For each ice-ocean sector we plot runoff for the largest glacier by ice flux in the sector, as in Fig. 7 of the main paper.



Figure S4. Evolution of JJA runoff in all models and sectors, grouped by ice-ocean sector. Each plot shows runoff for the largest glacier by ice flux in each sector (Table S1), while the colors differentiate the CMIP5 AOGCMs. For clarity, annual values are thin lines and a 20-year moving mean is plotted in thick lines.



**Figure S5.** Evolution of 200-500 m ocean thermal forcing in all models and sectors, grouped by CMIP5 AOGCM. Each plot shows a CMIP5 AOGCM, while the colors on each plot differentiate the ice-ocean sectors.



Figure S6. Evolution of 200-500 m ocean thermal forcing in all models and sectors, grouped by ice-ocean sector. Each plot shows an ice-ocean sector while the colors differentiate the CMIP5 AOGCMs.



Figure S7. Retreat projections grouped by CMIP5 AOGCM. Only the medium retreat cases are shown.



**Figure S8.** Retreat projections grouped by sector. The lines show the medium retreat projections for each CMIP AOGCM while the shading shows the low and high projections for MIROC5 RCP8.5 only; the low to high range is similar for all other RCP8.5 simulations.