Table 4.5 Comparison of mean observed near-surface temperature and precipitation over the Alpine region with corresponding values from model simulations of current 1 x CO_2 and putative 2 x CO_2 climate.

		Temperature (˚C)				Precipitation			
		Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct
Observed	OBS	–1.0	8.0	18.0	9.1	3.10	3.57	4.00	3.87
1 x CO_2 bias	CCM1–OBS	+3.0	-1.0	+9.1	+2.1	+15%	+12%	-83%	-12%
	MM4 –OBS	–3.0	-4.9	+5.0	-5.2	-38%	-29%	-65%	-43%
2 x CO_2 effect	CCM1	+3.5	+3.0	+2.6	+4.2	+20%	+20%	+21%	+13%
	MM4	+3.7	+3.2	+2.4	+4.7	+1%	+6%	+16%	-12%

Note: The labels OBS, CCM1, and MM4 refer respectively to observations, the CCM1 general circulation model, and the nested MM4 regional climate model. The 2 x CO_2 effect is defined as 2 x CO_2 – 1 x CO_2. Precipitation is given in millimeter per day for the observations, and in percentage of the observed values for the model-derived results. Compiled from data in Marinucci and Giorgi 1992 and Giorgi, Marinucci, and Visconti 1992.