Projection of Future Mortality Due to Temperature and Population Changes under Representative Concentration Pathways and Shared Socioeconomic Pathways

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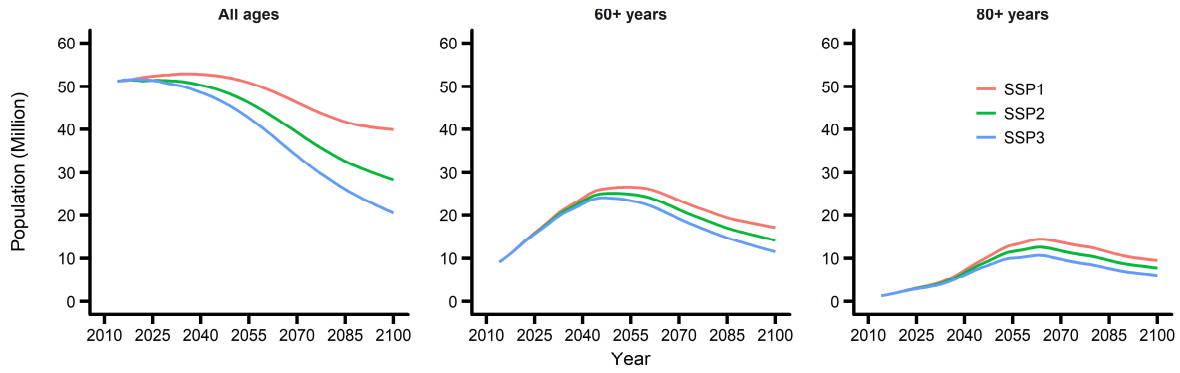

Figure S1. Overall population changes based on SSP scenarios for all, more than 60 years old and 80 years old.

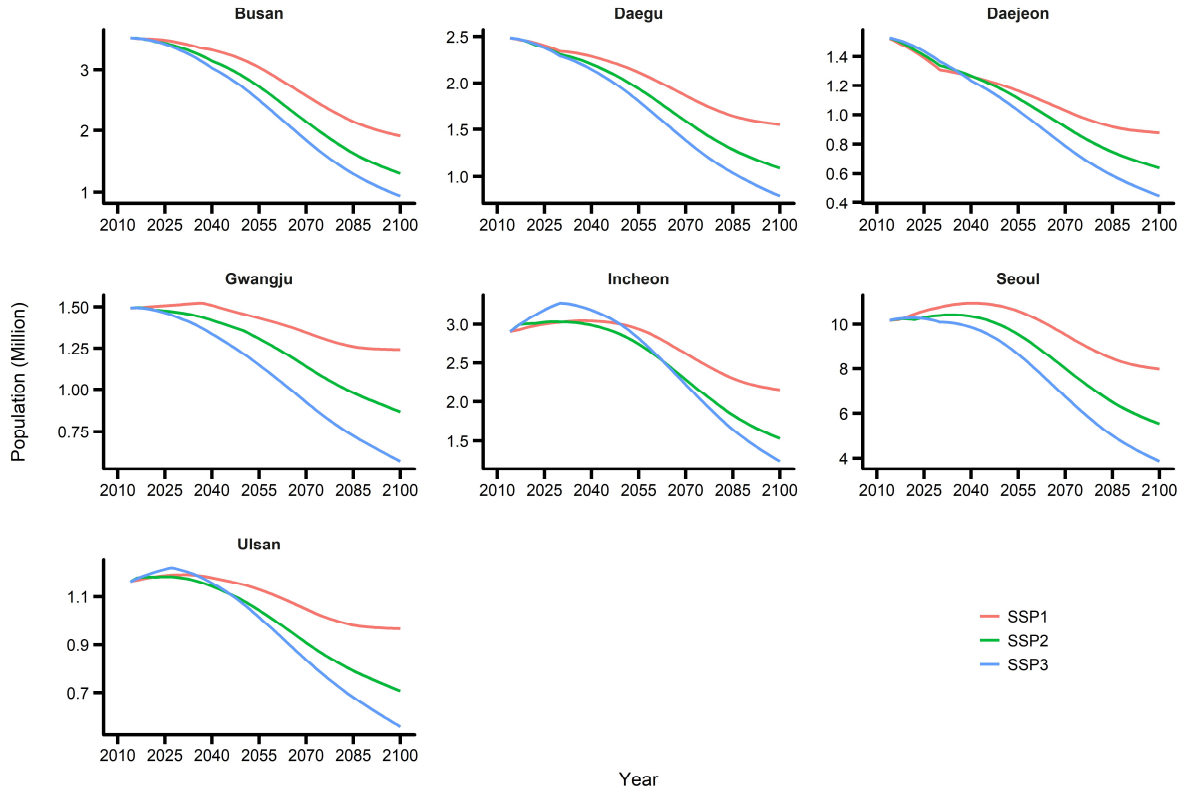

Figure S2. Projection of population changes based on SSP scenarios in seven major cities of South Korea.

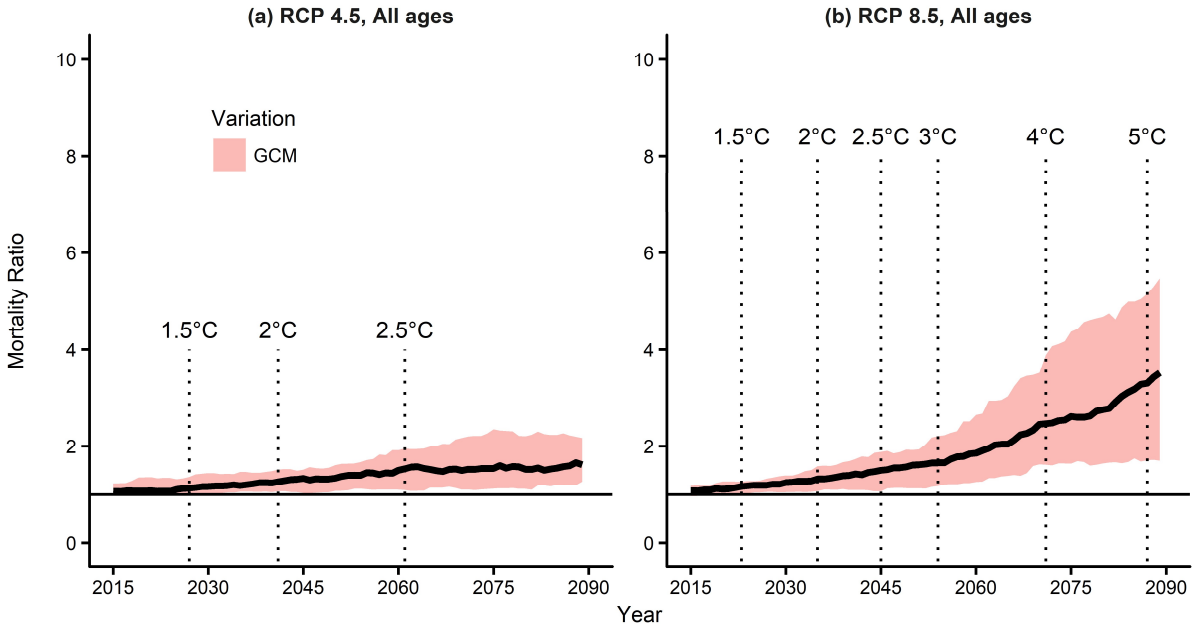

Figure S3. Mortality ratio due to only temperature change under (a) RCP 4.5 and (b) 8.5 for total population.

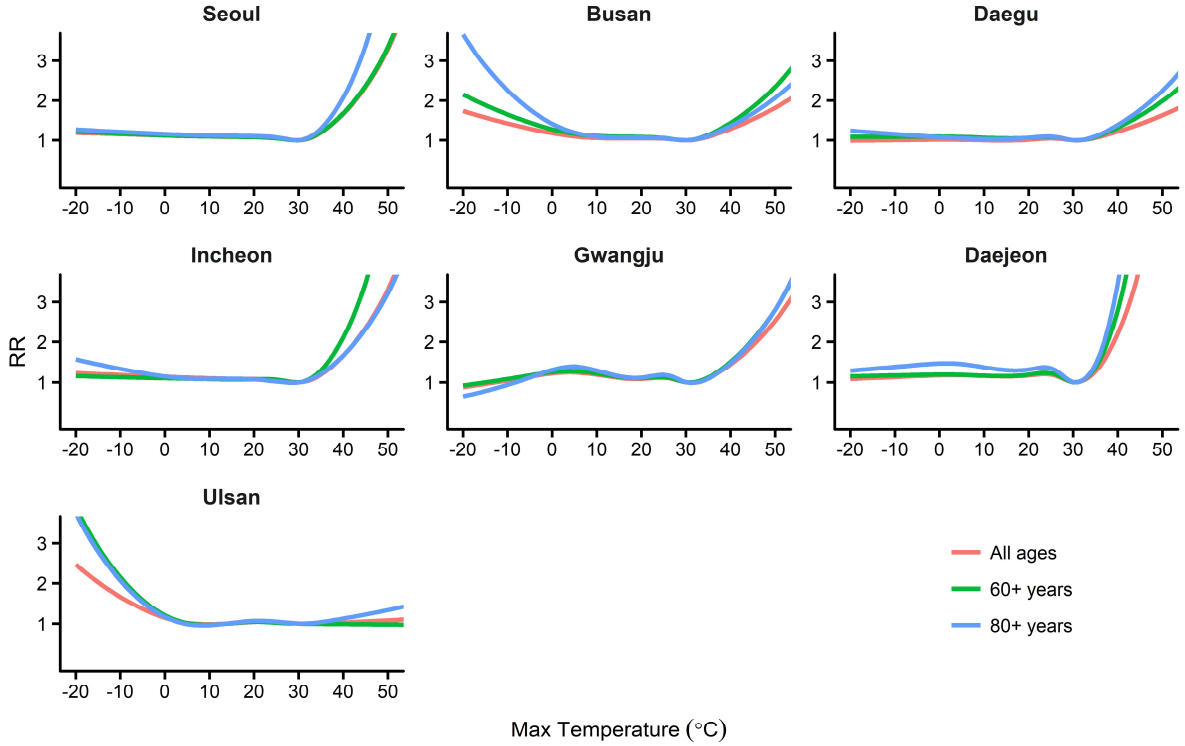

Figure S4. Association between temperature and mortality in seven major cities of South Korea.

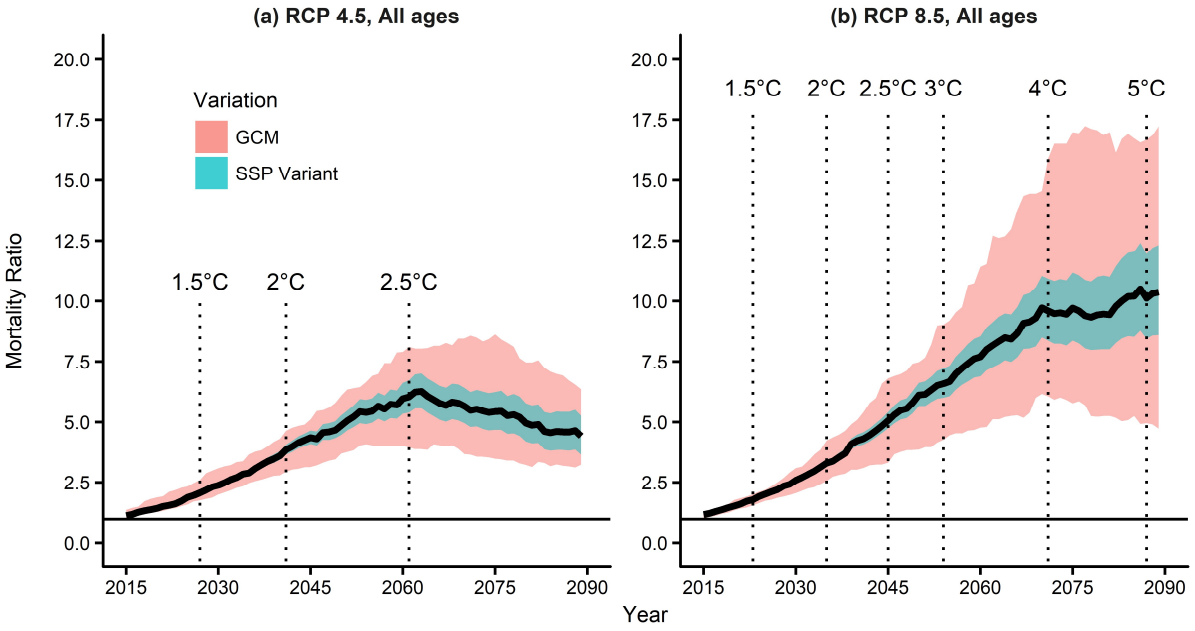

Figure S5. Mortality ratio due to temperature and population changes under (a) RCP 4.5 and (b) 8.5 for total population.

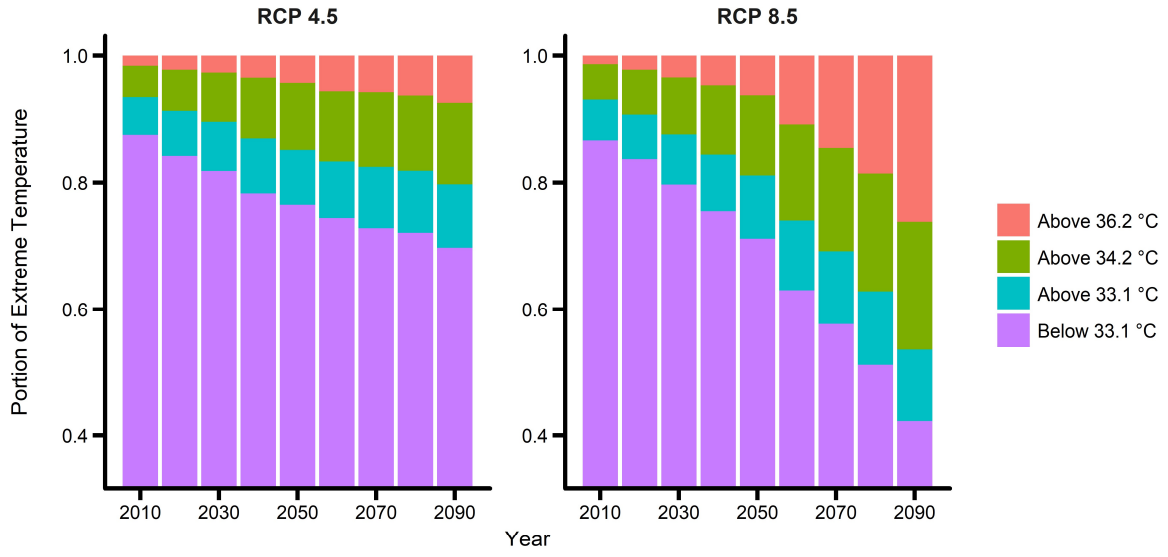

Figure S6. Portion of baseline 90-, 95-, 99-percentile temperatures (33.1℃, 34.2℃, and 36.2℃) due to temperature change.

Table S1. The population of seven major cities of South Korea in 2015.

City	Population (Millions)	Ratio
Seoul	10.21	19.9%
Busan	3.52	6.9%
Daegu	2.48	4.8%
Incheon	2.94	5.7%
Gwangju	1.50	2.9%
Daejeon	1.52	3.0%
Ulsan	1.17	2.3%

Table S2. The mortality ratios (MRs) according to temperature changes only.

Temperature Increase	RCP 4.5				RCP 8.5			
	Period	MR (All)	MR (60+)	MR (80+)	Period	MR (All)	MR (60+)	MR (80+)
1.5 ℃	2027 (2023-2032)	**1.13**	**1.20**	**1.12**	2023 (2019-2028)	**1.17**	**1.23**	**1.16**
2 ℃	2041 (2037-2046	**1.26**	**1.44**	**1.25**	2035 (2031-2040)	**1.32**	**1.48**	**1.34**
2.5 ℃	2061 (2057-2066)	**1.53**	**1.75**	**1.60**	2045 (2041-2050	**1.50**	**1.71**	**1.57**
3 ℃	-	-	-	-	2054 (2050-2059)	**1.65**	**1.94**	**1.77**
4 ℃	-	-	-	-	2071 (2067-2076)	**2.46**	**3.08**	**2.74**
5 ℃	-	-	-	-	2087 (2083-2092)	**3.30**	**4.23**	**3.74**

Table S3. The mortality ratios (MRs) according to temperature and population changes.

Temperature Increase	RCP 4.5				RCP 8.5			
	Period	MR (All)	MR (60+)	MR (80+)	Period	MR (All)	MR (60+)	MR (80+)
1.5 ℃	2027 (2023-2032)	**2.07**	**2.55**	**3.01**	2023 (2019-2028)	**1.78**	**2.14**	**2.45**
2 ℃	2041 (2037-2046	**3.85**	**5.04**	**7.57**	2035 (2031-2040)	**3.30**	**4.23**	**6.04**
2.5 ℃	2061 (2057-2066)	**6.04**	**8.07**	**16.35**	2045 (2041-2050	**5.06**	**6.68**	**11.61**
3 ℃	-	-	-	-	2054 (2050-2059)	**6.59**	**8.80**	**16.93**
4 ℃	-	-	-	-	2071 (2067-2076)	**9.60**	**12.93**	**26.83**
5 ℃	-	-	-	-	2087 (2083-2092)	**10.12**	**13.66**	**28.56**