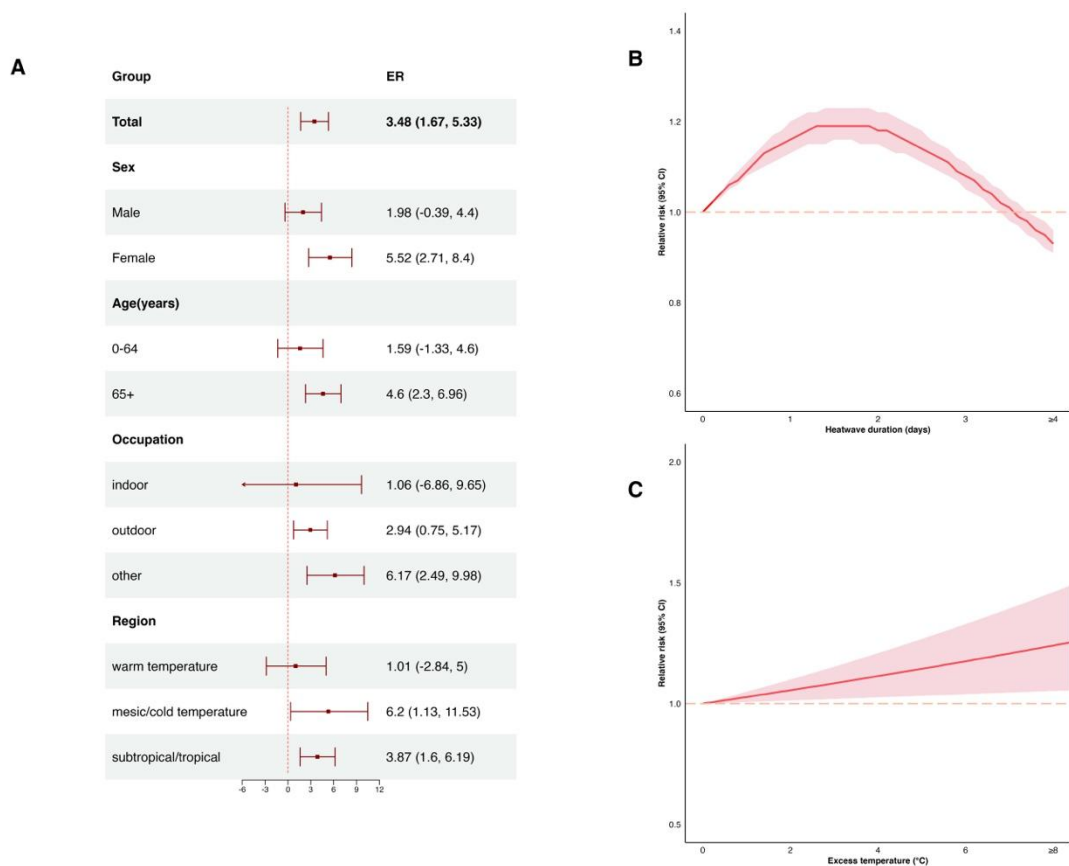
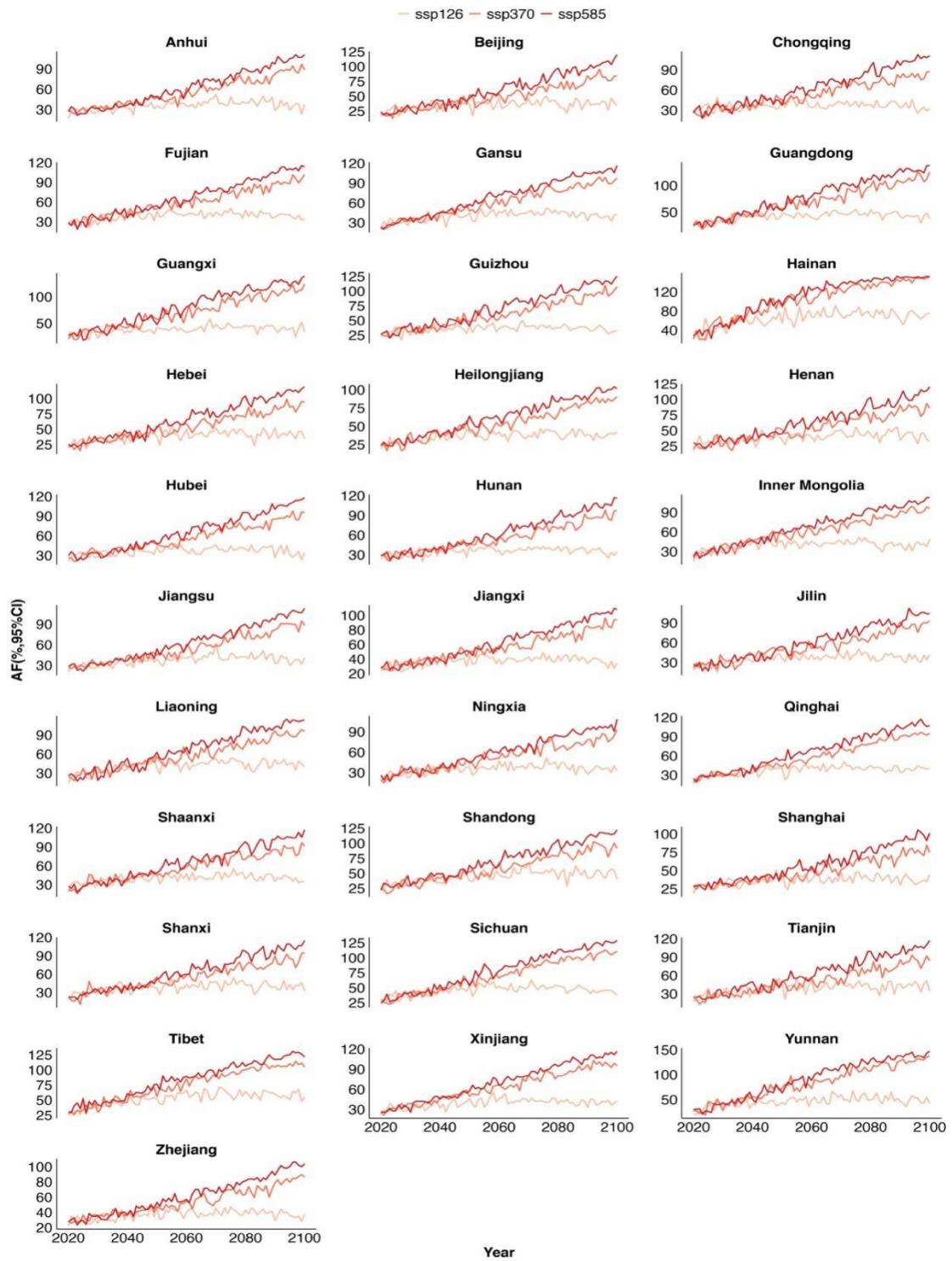


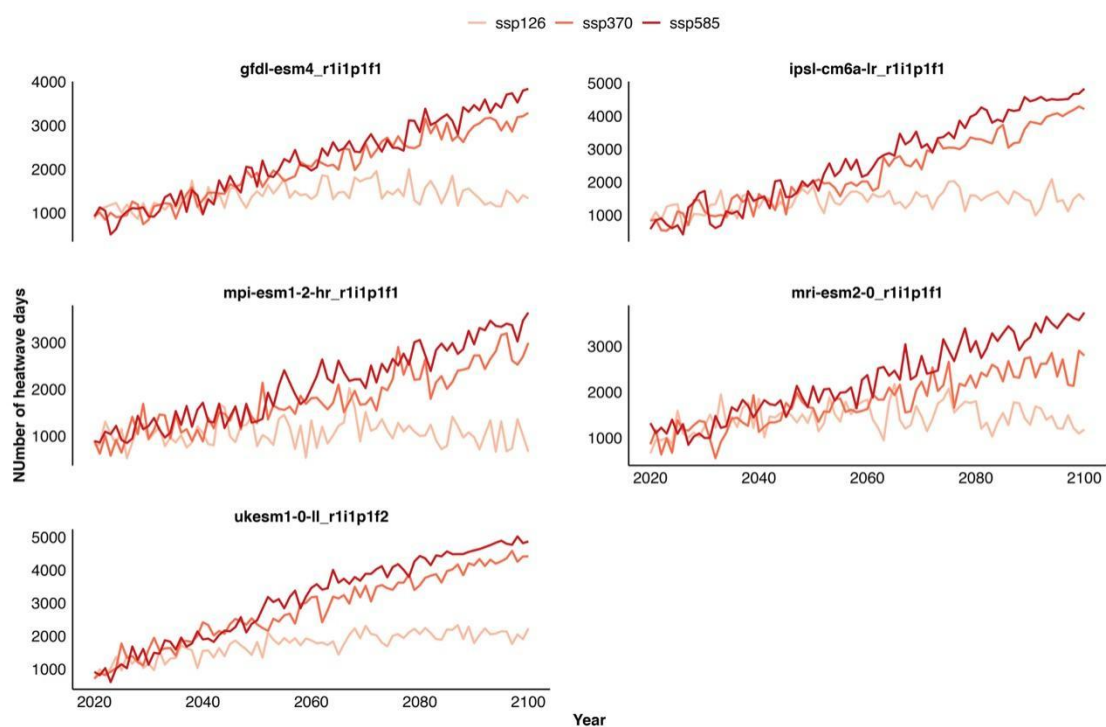
Supplementary Figure S1. The lag effect pattern of different heatwave definition on CKD mortality.



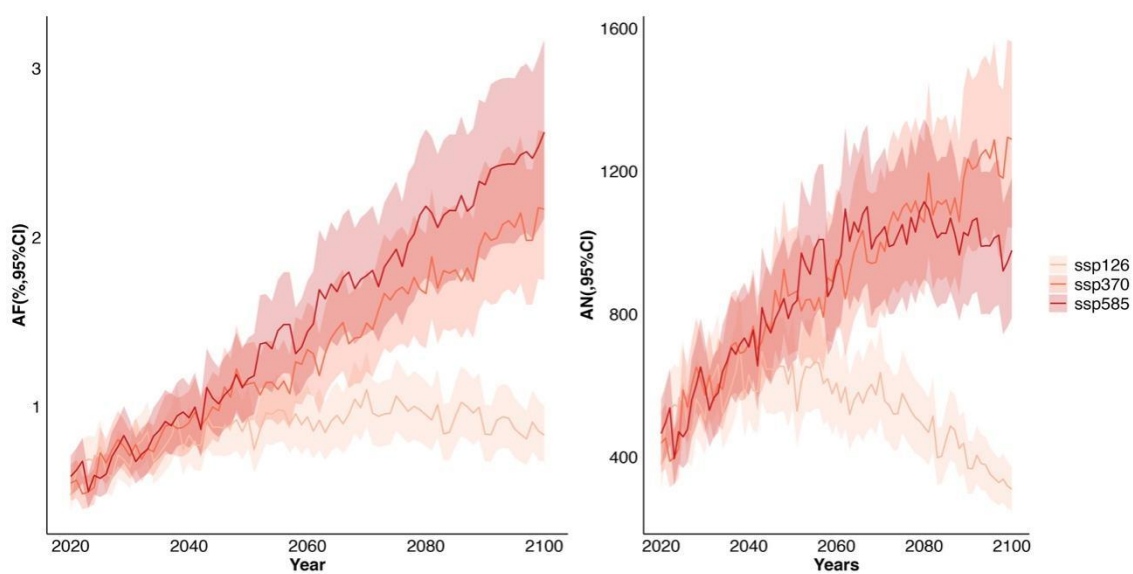
Supplementary Figure S2. The excess rate (ER,%) of CKD attributed to heatwave by subpopulations(A), heatwave duration(B) and intensity(C). excess rate(ER,%).



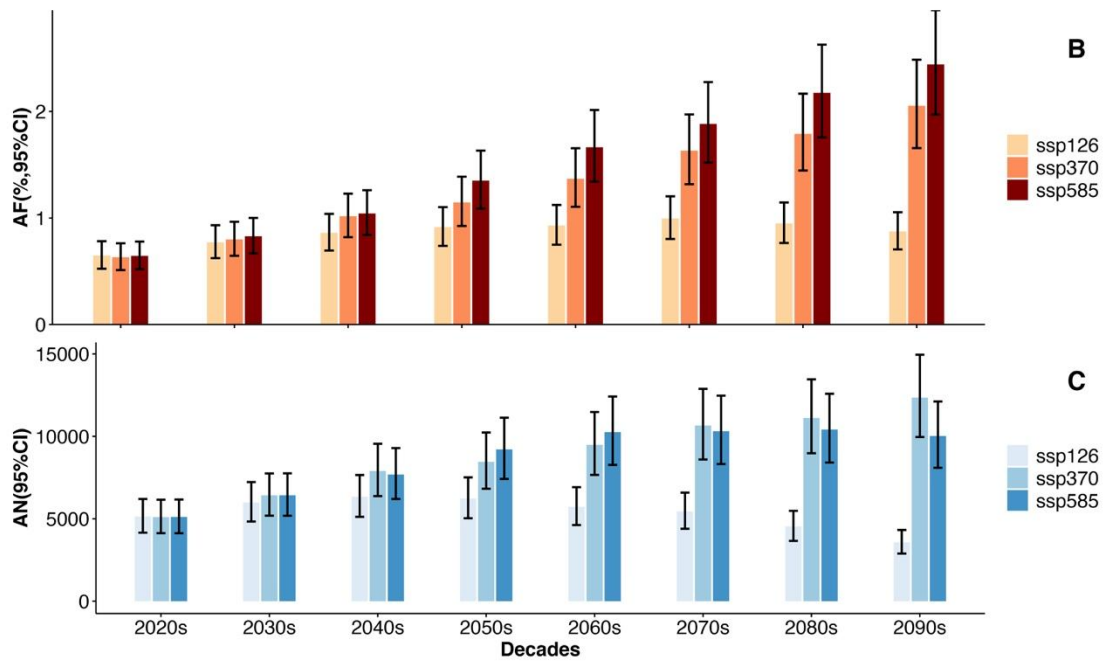
Supplementary Figure S3. Projected number of heatwaves days under different climate change scenarios in the future at provincial level in China. Heatwave was defined as an event with daily TM_{max} exceeding the 92.5th percentiles for 3 or over consecutive days in each province. We firstly summed each province’s projected number of heatwaves days in the warm seasons (May to September). Then, we summarized the annual average number of heatwaves days during each period (2020s, 2030s, 2040s, 2050s, 2060s, 2070s, 2080s, and 2090s) across China.



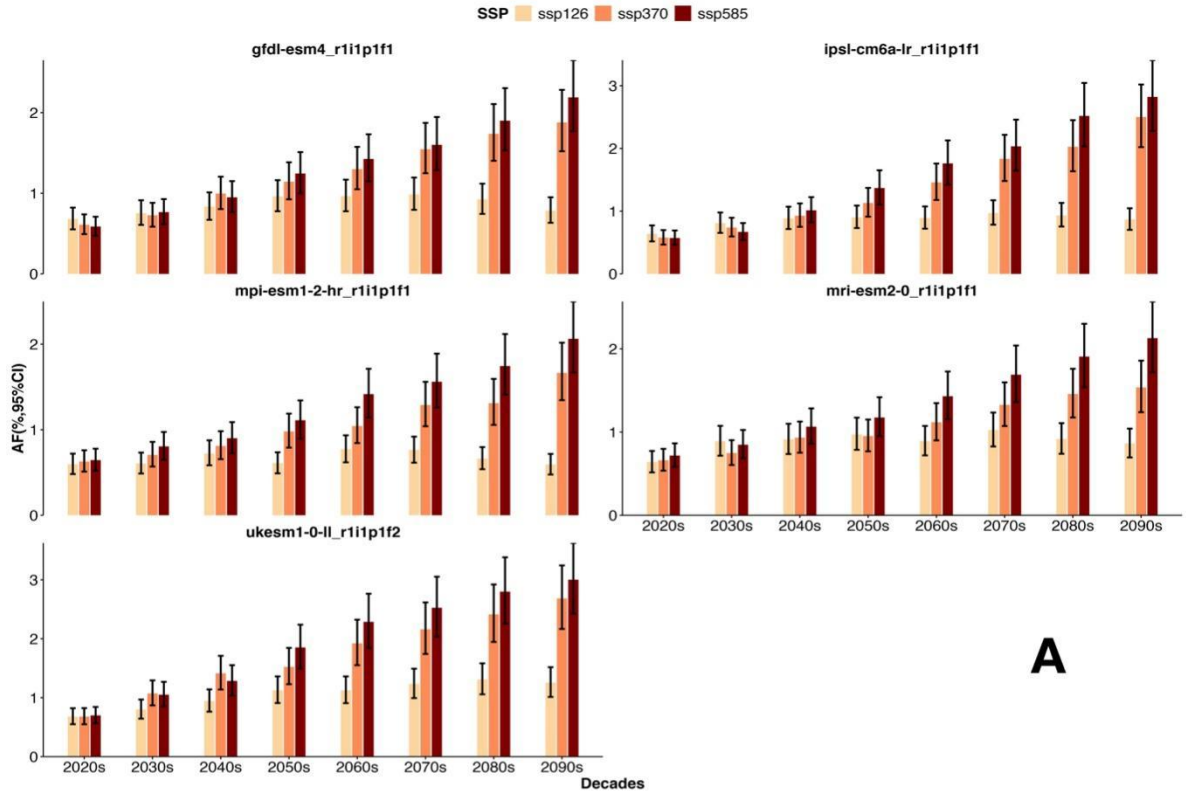
Supplementary Figure S4. Projected number of heatwaves days by different GCMs in the future across China.



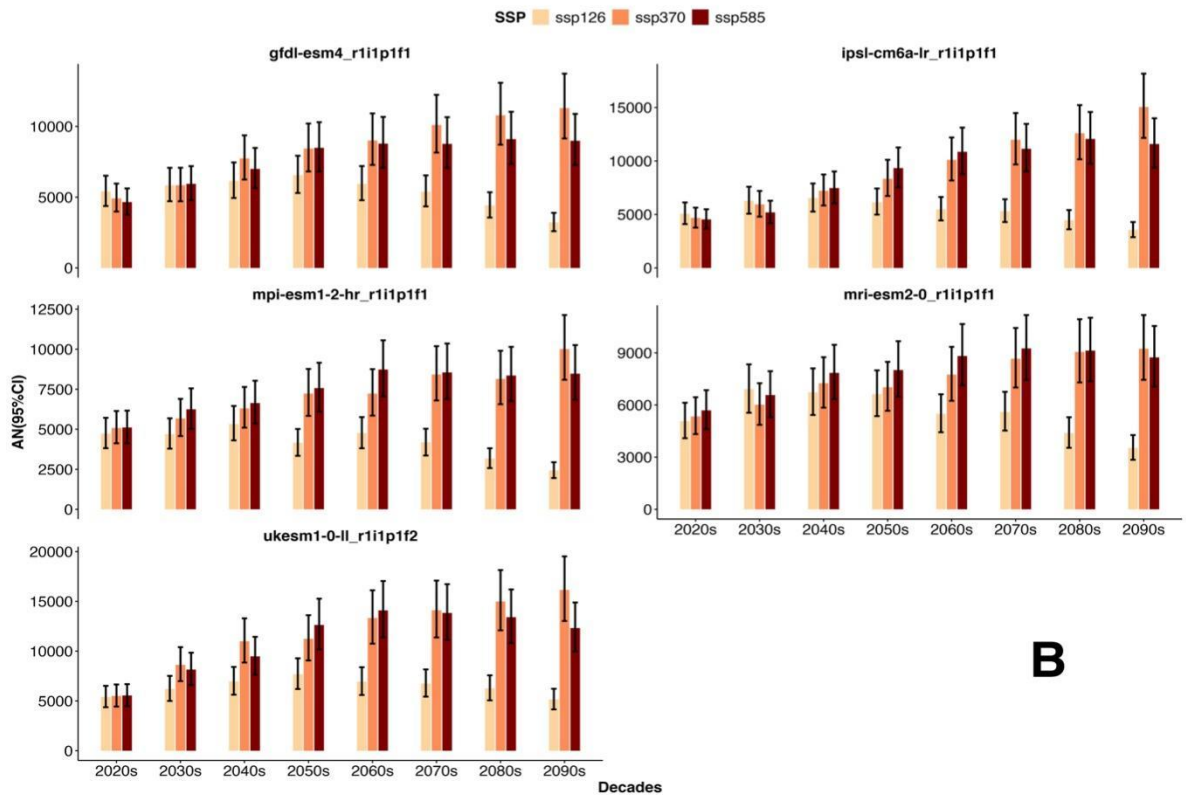
Supplementary Figure S5. Projected national AFs of CKD deaths attributable to heatwaves from 2020 to 2100 years.



Supplementary Figure S6. B: Projected AFs of kidney deaths attributable to heatwaves from 2020s to 2090s; C: Projected AN of kidney deaths attributable to heatwaves from 2020s to 2090s).



A



B

Supplementary Figure S7. Projected AN and AF of CKD deaths due to heatwaves by different GCMs. Panel A and B show the projected AF and AN of CKD deaths due to heatwaves, respectively.

Supplementary Table S1. Summary of Shared Socioeconomic Pathways⁽⁸⁾

Scenarios	Summary of SSP narratives	Radiative forcing
SSP1-2.6 (Sustainability – Taking the Green Road (Low challenges to mitigation and adaptation))	The global trajectory is gradually shifting towards a more sustainable direction, prioritizing inclusive development while respecting perceived environmental limits. This transition is driven by a growing commitment to achieving development objectives, leading to reduced inequality both among and within nations. Consumption patterns are evolving towards lower material growth and decreased resource and energy intensity.	2.6 W/m ² of radiative forcing by 2100
SSP3-7.0 Regional Rivalry – A Rocky Road (High challenges to mitigation and adaptation)	Over time, policies increasingly pivot towards national and regional security challenges. Countries prioritize attaining energy and food security targets within their regions, often at the expense of broader developmental initiatives. Investments in education and technological advancement decline, resulting in sluggish economic growth. Population growth rates vary, with industrialized nations experiencing low growth while developing countries see higher rates. Insufficient international attention to environmental issues contributes to severe environmental degradation in certain regions.	7.0 W/m ² of radiative forcing by 2100
SSP5-8.5 Fossil-fueled Development – Taking the Highway (High challenges to mitigation, low challenges to adaptation)	Global markets are increasingly integrated. There are also strong investments in health, education, and institutions to enhance human and social capital. At the same time, the push for economic and social development is coupled with the exploitation of abundant fossil fuel resources and the adoption of resource and energy intensive lifestyles around the world. All these factors lead to rapid growth of the global economy, while global population peaks and declines in the 21st century.	8.5 W/m ² of radiative forcing by 2100

Supplementary Table S2. Basic information of 5 models in the Coupled Model Intercomparison Project phase 6

Model name	Institution (Country)	Ensemble member	Model resolution (lat. × lon.)
GFDL-ESM4	NOAA-GFDL (USA)	r1i1p1f1	0.25° × 0.25°
IPSL-CM6A-LR	IPSL (France)	r1i1p1f1	0.25° × 0.25°
MPI-ESM1-2-HR	DKRZ (Germany)	r1i1p1f1	0.25° × 0.25°
MRI-ESM2-0	MRI (Japan)	r1i1p1f1	0.25° × 0.25°
UKESM1-0-LL	JULES-ES (UK)	r1i1p1f2	0.25° × 0.25°

Supplementary Table S3. The Akaike Information Criterion (AIC) values in the CKD model fitting using various heatwave definitions

Heatwave	Definition of heatwave	AIC	BIC
HW900.2	Daily maximum temperature \geq 90.0th percentile for 2 or more consecutive days	952770.5546	952845.3249
HW900.3	Daily maximum temperature \geq 90.0th percentile for 3 or more consecutive days	952772.311	952847.0814
HW900.4	Daily maximum temperature \geq 90.0th percentile for 4 or more consecutive days	952774.8585	952849.6288
HW900.5	Daily maximum temperature \geq 90.0th percentile for 5 or more consecutive days	952779.1664	952853.9367
HW925.2	Daily maximum temperature \geq 92.5th percentile for 2 or more consecutive days	952772.7119	952847.4822
HW925.3	Daily maximum temperature \geq 92.5th percentile for 3 or more consecutive days	952769.6199	952844.3902
HW925.4	Daily maximum temperature \geq 92.5th percentile for 4 or more consecutive days	952779.0407	952853.811
HW925.5	Daily maximum temperature \geq 92.5th percentile for 5 or more consecutive days	952782.6962	952857.4665
HW950.2	Daily maximum temperature \geq 95.0th percentile for 2 or more consecutive days	952777.0958	952851.8661
HW950.3	Daily maximum temperature \geq 95.0th percentile for 3 or more consecutive days	952782.1918	952856.9621
HW950.4	Daily maximum temperature \geq 95.0th percentile for 4 or more consecutive days	952783.1886	952857.9589
HW950.5	Daily maximum temperature \geq 95.0th percentile for 5 or more consecutive days	952785.6819	952860.4523
HW975.2	Daily maximum temperature \geq 97.5th percentile for 2 or more consecutive days	952784.6087	952859.3791
HW975.3	Daily maximum temperature \geq 97.5th percentile for 3 or more consecutive days	952787.2389	952862.0092
HW975.4	Daily maximum temperature \geq 97.5th percentile for 4 or more consecutive days	952790.4333	952865.2037
HW975.5	Daily maximum temperature \geq 97.5th percentile for 5 or more consecutive days	952798.0111	952872.7815

Supplementary Table S4. Comparison of meteorological exposure factors between case and control days of CKD death

Groups	Maximum temperature (°C)			Relative humidity (%)		
	Case days	Control days	<i>P</i>	Case days	Control days	<i>P</i>
Total	26.34 ± 4.60	26.29 ± 4.59	< 0.01	71.42 ± 11.70	71.57 ± 11.48	< 0.01
Sex						
Male	26.37 ± 4.59	26.34 ± 4.54	0.04	71.48 ± 11.92	71.62 ± 11.54	< 0.01
Female	26.45 ± 4.49	26.40 ± 4.45	< 0.01	71.46 ± 11.80	71.63 ± 11.56	< 0.01
Age (year)						
0-64	26.37 ± 4.53	26.34 ± 4.51	0.05	71.53 ± 11.89	71.69 ± 11.54	0.01
65+	26.46 ± 4.50	26.40 ± 4.46	< 0.01	71.48 ± 11.74	71.66 ± 11.48	< 0.01
Occupation						
indoor	26.80 ± 4.41	26.80 ± 4.01	0.99	72.37 ± 13.55	72.55 ± 12.16	0.23
outdoor	26.41 ± 4.53	26.36 ± 4.49	< 0.01	71.55 ± 11.66	71.68 ± 11.42	0.01
other	26.61 ± 4.41	26.61 ± 4.28	0.75	71.66 ± 12.65	71.69 ± 11.95	0.72
Region						
warm	27.20 ± 3.44	27.18 ± 3.38	0.43	64.70 ± 7.50	64.84 ± 7.15	0.11
mesic/cold	23.91 ± 3.25	23.81 ± 3.22	< 0.01	59.98 ± 14.90	60.11 ± 14.57	0.22
subtropical	27.73 ± 3.44	27.70 ± 3.40	< 0.01	79.48 ± 3.84	79.55 ± 3.74	0.02

Supplementary Table S5. Provincial associations of heatwave exposure with the mortality risk of ckd

Province	ER% (95% CI)	Rank
Gansu	16.81 (1.69, 34.18)	1
Xinjiang	8.89 (-0.56, 19.24)	2
Shanghai	8.13 (-8.96, 28.41)	3
Fujian	7.39 (2.15, 12.91)	4
Heilongjiang	7.07 (1.85, 12.55)	5
Guangdong	6.53 (1.69, 11.59)	6
Inner Mongolia	5.26 (-2.04, 13.11)	7
Ningxia	5.18 (-0.47, 11.16)	8
Qinghai	4.98 (-6.53, 17.9)	9
Liaoning	4.58 (-3.29, 13.09)	10
Jilin	4.55 (-2.09, 11.64)	11
Anhui	4.25 (-4.49, 13.79)	12
Hunan	4.08 (-0.48, 8.84)	13
Jiangxi	3.48 (-3.74, 11.24)	14
Beijing	3.41 (-4.86, 12.4)	15
Tibet	3.4 (2.14, 4.68)	16
Shanxi	2.61 (-3.76, 9.39)	17
Yunnan	2.15 (-8.13, 13.57)	18
Henan	1.25 (-4, 6.8)	19
Sichuan	1.19 (-6.92, 10)	20
Chongqing	1.18 (-7.44, 10.6)	21
Hubei	0.93 (-3.23, 5.27)	22
Guizhou	0.7 (-4.8, 6.51)	23
Shandong	-0.95 (-6.38, 4.79)	24
Zhejiang	-1.43 (-7.73, 5.31)	25
Hebei	-1.45 (-10, 7.91)	26
Jiangsu	-1.66 (-12.08, 9.99)	27
Shaanxi	-3.1 (-18.24, 14.86)	28
Guangxi	-3.3 (-19.5, 16.15)	29
Tianjin	-8.42 (-18.26, 2.6)	30
Hainan	-26.36 (-49.53, 7.46)	31

Supplementary Table S6. The excess risk (%) of CKD mortality for per 1 °C increase in temperature of heatwave

Group	ER (% , 95% CI)
Total	2.48(0.12 to 4.91)
Male	1.39 (-1.72to 4.62)
Female	3.87 (0.29 to 7.58)
Age(years)	
0-64	0.46 (-3.41 to 4.47)
65+	3.63(0.65 to 6.70)
Occupation	
indoor	-0.71 (-10.92 to 10.62)
outdoor	3.33 (0.46 to 6.31)
other	0.31 (-4.35 to 5.12)
Region	
warm temperature	4.43 (-0.33 to 9.41)
mesic/cold temperature	1.17 (-4.54 to 7.21)
warm temperature	2.37 (0.77 to 5.58)

Supplementary Table S7. Projected AN and AF of CKD due to heatwaves at different periods at national level

Scenarios	Periods	Projected overall CKD deaths	AN (95% CI)	AF (% , 95% CI)
SSP1-2.6	2020s	793,026	5136 (4153, 6199)	0.65 (0.52, 0.78)
SSP1-2.6	2030s	775697	5986 (4832, 7229)	0.77 (0.62, 0.93)
SSP1-2.6	2040s	737140	6340 (5117, 7655)	0.86 (0.69, 1.04)
SSP1-2.6	2050s	681766	6234 (5033, 7514)	0.91 (0.74, 1.1)
SSP1-2.6	2060s	616282	5727 (4619, 6917)	0.93 (0.75, 1.12)
SSP1-2.6	2070s	547459	5449 (4393, 6585)	1 (0.8, 1.2)
SSP1-2.6	2080s	478495	4542 (3661, 5481)	0.95 (0.77, 1.15)
SSP1-2.6	2090s	410081	3580 (2891, 4323)	0.87 (0.7, 1.05)
SSP3-7.0	2020s	807779	5102 (4127, 6158)	0.63 (0.51, 0.76)
SSP3-7.0	2030s	803912	6421 (5188, 7751)	0.8 (0.65, 0.96)
SSP3-7.0	2040s	777490	7901 (6374, 9550)	1.02 (0.82, 1.23)
SSP3-7.0	2050s	737595	8453 (6821, 10233)	1.15 (0.92, 1.39)
SSP3-7.0	2060s	693484	9486 (7661, 11475)	1.37 (1.1, 1.65)
SSP3-7.0	2070s	653172	10656 (8597, 12879)	1.63 (1.32, 1.97)
SSP3-7.0	2080s	621146	11113 (8976, 13456)	1.79 (1.45, 2.17)
SSP3-7.0	2090s	601574	12349 (9960, 14952)	2.05 (1.66, 2.49)
SSP5-8.5	2020s	792881	5111 (4123, 6170)	0.64 (0.52, 0.78)
SSP5-8.5	2030s	775559	6423 (5182, 7758)	0.83 (0.67, 1)
SSP5-8.5	2040s	737125	7686 (6200, 9287)	1.04 (0.84, 1.26)
SSP5-8.5	2050s	681943	9208 (7417, 11129)	1.35 (1.09, 1.63)
SSP5-8.5	2060s	616620	10260 (8269, 12414)	1.66 (1.34, 2.01)
SSP5-8.5	2070s	547899	10311 (8321, 12469)	1.88 (1.52, 2.28)
SSP5-8.5	2080s	479006	10413 (8411, 12583)	2.17 (1.76, 2.63)
SSP5-8.5	2090s	410646	10023 (8091, 12111)	2.44 (1.97, 2.95)

Supplementary Table S8. Projected AN and AF of CKD death due to heatwaves in the 2090s in each province

Provinces	Scenarios	Projected overall CKD deaths	AN (95% CI)	AF (% , 95% CI)
Beijing	SSP1-2.6	8339	70 (30, 110)	0.841 (0.361, 1.324)
Beijing	SSP3-7.0	11660	212 (91, 334)	1.816 (0.78, 2.861)
Beijing	SSP5-8.5	7573	172 (74, 272)	2.277 (0.978, 3.588)
Tianjin	SSP1-2.6	4988	48 (22, 73)	0.968 (0.436, 1.469)
Tianjin	SSP3-7.0	7429	137 (62, 207)	1.838 (0.829, 2.791)
Tianjin	SSP5-8.5	5134	117 (53, 178)	2.285 (1.03, 3.47)
Hebei	SSP1-2.6	19128	178 (78, 276)	0.933 (0.41, 1.444)
Hebei	SSP3-7.0	29967	575 (253, 890)	1.92 (0.844, 2.971)
Hebei	SSP5-8.5	19593	473 (208, 733)	2.417 (1.063, 3.74)
Shanxi	SSP1-2.6	11505	101 (46, 152)	0.876 (0.402, 1.32)
Shanxi	SSP3-7.0	16877	308 (141, 464)	1.826 (0.838, 2.752)
Shanxi	SSP5-8.5	11828	269 (123, 405)	2.27 (1.042, 3.421)
Inner Mongolia	SSP1-2.6	8706	74 (34, 119)	0.851 (0.388, 1.365)
Inner Mongolia	SSP3-7.0	11830	242 (110, 388)	2.045 (0.932, 3.278)
Inner Mongolia	SSP5-8.5	8774	201 (92, 322)	2.289 (1.044, 3.67)
Liaoning	SSP1-2.6	13732	137 (68, 217)	0.998 (0.492, 1.582)
Liaoning	SSP3-7.0	19465	392 (193, 622)	2.015 (0.993, 3.194)
Liaoning	SSP5-8.5	13299	318 (157, 504)	2.389 (1.178, 3.788)
Jilin	SSP1-2.6	8312	65 (31, 104)	0.786 (0.369, 1.247)
Jilin	SSP3-7.0	12074	227 (107, 360)	1.878 (0.883, 2.981)
Jilin	SSP5-8.5	8443	186 (88, 296)	2.208 (1.037, 3.504)
Heilongjiang	SSP1-2.6	10317	84 (40, 134)	0.813 (0.389, 1.301)
Heilongjiang	SSP3-7.0	15539	291 (139, 466)	1.873 (0.897, 2.998)
Heilongjiang	SSP5-8.5	10504	225 (108, 361)	2.146 (1.027, 3.435)
Shanghai	SSP1-2.6	12131	96 (46, 147)	0.792 (0.378, 1.212)
Shanghai	SSP3-7.0	16615	278 (133, 425)	1.673 (0.798, 2.559)
Shanghai	SSP5-8.5	11914	249 (119, 381)	2.092 (0.998, 3.201)
Jiangsu	SSP1-2.6	27131	217 (116, 339)	0.801 (0.427, 1.25)
Jiangsu	SSP3-7.0	40311	779 (415, 1215)	1.933 (1.03, 3.014)
Jiangsu	SSP5-8.5	27518	632 (337, 985)	2.296 (1.224, 3.579)
Zhejiang	SSP1-2.6	19725	155 (77, 235)	0.784 (0.393, 1.19)
Zhejiang	SSP3-7.0	29158	531 (266, 805)	1.82 (0.911, 2.761)
Zhejiang	SSP5-8.5	19817	434 (217, 658)	2.189 (1.097, 3.322)
Anhui	SSP1-2.6	15329	116 (55, 177)	0.755 (0.36, 1.157)
Anhui	SSP3-7.0	23591	457 (218, 700)	1.935 (0.924, 2.966)
Anhui	SSP5-8.5	15443	354 (169, 543)	2.293 (1.095, 3.515)
Fujian	SSP1-2.6	10483	88 (40, 138)	0.843 (0.383, 1.317)
Fujian	SSP3-7.0	15539	313 (142, 489)	2.012 (0.915, 3.144)
Fujian	SSP5-8.5	10415	251 (114, 393)	2.412 (1.097, 3.769)

Jiangxi	SSP1-2.6	11980	93 (44, 138)	0.778 (0.369, 1.15)
Jiangxi	SSP3-7.0	18054	341 (162, 504)	1.888 (0.895, 2.791)
Jiangxi	SSP5-8.5	11810	264 (125, 391)	2.237 (1.061, 3.307)
Shandong	SSP1-2.6	26549	284 (144, 444)	1.07 (0.544, 1.671)
Shandong	SSP3-7.0	41307	854 (434, 1334)	2.067 (1.051, 3.229)
Shandong	SSP5-8.5	27204	686 (349, 1072)	2.522 (1.283, 3.94)
Henan	SSP1-2.6	24115	215 (110, 351)	0.892 (0.454, 1.456)
Henan	SSP3-7.0	38353	720 (367, 1175)	1.877 (0.956, 3.063)
Henan	SSP5-8.5	25017	589 (300, 961)	2.354 (1.199, 3.843)
Hubei	SSP1-2.6	15090	111 (53, 167)	0.734 (0.35, 1.105)
Hubei	SSP3-7.0	22473	438 (209, 659)	1.947 (0.93, 2.932)
Hubei	SSP5-8.5	14766	352 (168, 530)	2.382 (1.137, 3.587)
Hunan	SSP1-2.6	17008	126 (63, 198)	0.741 (0.373, 1.161)
Hunan	SSP3-7.0	25786	498 (251, 781)	1.932 (0.974, 3.03)
Hunan	SSP5-8.5	17091	393 (198, 617)	2.302 (1.16, 3.61)
Guangdong	SSP1-2.6	37097	337 (148, 523)	0.907 (0.398, 1.411)
Guangdong	SSP3-7.0	54540	1339 (588, 2082)	2.455 (1.077, 3.817)
Guangdong	SSP5-8.5	36839	1044 (458, 1624)	2.835 (1.244, 4.408)
Guangxi	SSP1-2.6	11288	96 (46, 152)	0.851 (0.406, 1.347)
Guangxi	SSP3-7.0	17006	414 (197, 655)	2.435 (1.16, 3.854)
Guangxi	SSP5-8.5	11208	316 (151, 501)	2.823 (1.345, 4.468)
Hainan	SSP1-2.6	2344	35 (18, 53)	1.498 (0.751, 2.269)
Hainan	SSP3-7.0	3484	112 (56, 169)	3.21 (1.609, 4.863)
Hainan	SSP5-8.5	2283	76 (38, 114)	3.31 (1.659, 5.015)
Chongqing	SSP1-2.6	8160	61 (32, 94)	0.753 (0.386, 1.149)
Chongqing	SSP3-7.0	11635	207 (106, 315)	1.776 (0.911, 2.709)
Chongqing	SSP5-8.5	8082	186 (96, 284)	2.305 (1.182, 3.516)
Sichuan	SSP1-2.6	22822	221 (116, 338)	0.97 (0.509, 1.481)
Sichuan	SSP3-7.0	32835	770 (404, 1175)	2.346 (1.232, 3.58)
Sichuan	SSP5-8.5	23063	621 (326, 947)	2.692 (1.413, 4.107)
Guizhou	SSP1-2.6	11661	87 (40, 139)	0.746 (0.343, 1.194)
Guizhou	SSP3-7.0	16035	340 (156, 545)	2.122 (0.975, 3.396)
Guizhou	SSP5-8.5	11461	291 (134, 466)	2.538 (1.167, 4.062)
Yunnan	SSP1-2.6	15774	165 (79, 257)	1.047 (0.502, 1.632)
Yunnan	SSP3-7.0	21294	603 (289, 939)	2.83 (1.358, 4.411)
Yunnan	SSP5-8.5	15519	473 (227, 737)	3.048 (1.463, 4.75)
Tibet	SSP1-2.6	1742	22 (10, 36)	1.265 (0.598, 2.053)
Tibet	SSP3-7.0	1904	45 (21, 73)	2.375 (1.123, 3.855)
Tibet	SSP5-8.5	1445	39 (19, 64)	2.722 (1.286, 4.418)
Shaanxi	ssp126	10701	91 (44, 141)	0.855 (0.408, 1.314)
Shaanxi	ssp370	16016	301 (144, 463)	1.88 (0.897, 2.89)
Shaanxi	ssp585	11155	258 (123, 397)	2.316 (1.105, 3.56)
Gansu	ssp126	9101	78 (37, 123)	0.858 (0.409, 1.346)
Gansu	ssp370	12033	244 (116, 383)	2.03 (0.968, 3.184)

Gansu	ssp585	8901	209 (100, 329)	2.353 (1.122, 3.691)
Qinghai	ssp126	2827	24 (12, 37)	0.856 (0.419, 1.3)
Qinghai	ssp370	3281	67 (33, 102)	2.043 (1.001, 3.104)
Qinghai	ssp585	2607	62 (30, 94)	2.38 (1.166, 3.617)
Ningxia	ssp126	2574	20 (9, 30)	0.766 (0.338, 1.18)
Ningxia	ssp370	3573	63 (28, 96)	1.752 (0.773, 2.698)
Ningxia	ssp585	2636	55 (24, 85)	2.102 (0.927, 3.237)
Xinjiang	ssp126	9422	83 (39, 128)	0.877 (0.418, 1.361)
Xinjiang	ssp370	11912	254 (121, 394)	2.133 (1.017, 3.31)
Xinjiang	ssp585	9303	225 (107, 349)	2.417 (1.152, 3.751)

Supplementary Table S9. The sensitivity analysis on the association of heatwave exposure with CKD death

Sensitivity analysis		ER (95% CI)
Adjusting for pollutants		
	Without adjusting	3.48 (1.67, 5.33)
	-PM _{2.5}	3.51(1.81,5.24)
	-PM _{2.5} and RH	3.85 (2.2,5.52)
	+min temperature	3.35(1.26,5.47)
	+mean temperature	2.40(0.19,4.66)
	+O ₃	4.40(2.13,6.72)
	+NO ₂	4.05(2.33,5.98)
	PM _{2.5} + O ₃ +NO ₂	4.45(2.08,6.68)
Change heatwave definition		
	HW900.2	2.61 (0.98,4.28)
	HW900.3	2.92 (1.27,4.59)
	HW900.4	3.08 (1.39,4.80)
	HW900.5	3.72 (1.95,5.53)
	HW925.2	2.87 (1.09,4.68)
	HW925.3	3.48 (1.67,5.33)
	HW925.4	2.98 (1.10,4.90)
	HW925.5	3.44 (1.43,5.49)
	HW950.2	3.20 (1.14,5.30)

Supplementary Table S10. Projected AN and AF of CKD due to heatwaves by different GCMs at different periods at national level.

Scenarios	GCMs	Periods	Projected		
			overall CKD deaths	AN (95% CI)	AF (% , 95%CI)
ssp126	gfdl-esm4_rli1plf1	2020	793027	5406 (4378, 6518)	
ssp126	gfdl-esm4_rli1plf1	2030	775697	5843 (4716, 7083)	0.753 (0.608, 0.913)
ssp126	gfdl-esm4_rli1plf1	2040	737140	6155 (4944, 7456)	0.835 (0.671, 1.012)
ssp126	gfdl-esm4_rli1plf1	2050	681766	6560 (5299, 7930)	0.962 (0.777, 1.163)
ssp126	gfdl-esm4_rli1plf1	2060	616282	5947 (4788, 7201)	0.965 (0.777, 1.168)
ssp126	gfdl-esm4_rli1plf1	2070	547459	5393 (4351, 6543)	0.985 (0.795, 1.195)
ssp126	gfdl-esm4_rli1plf1	2080	478495	4422 (3562, 5355)	0.924 (0.744, 1.119)
ssp126	gfdl-esm4_rli1plf1	2090	410081	3218 (2598, 3897)	0.785 (0.634, 0.95)
ssp126	gfdl-esm4_rli1plf1	2100	37251	299 (239, 363)	0.802 (0.642, 0.975)
ssp126	ips1-cm6a-lr_rli1plf1	2020	793027	5071 (4102, 6127)	0.64 (0.517, 0.773)
ssp126	ips1-cm6a-lr_rli1plf1	2030	775697	6275 (5072, 7593)	0.809 (0.654, 0.979)
ssp126	ips1-cm6a-lr_rli1plf1	2040	737140	6535 (5270, 7896)	0.886 (0.715, 1.071)
ssp126	ips1-cm6a-lr_rli1plf1	2050	681766	6142 (4987, 7430)	0.901 (0.731, 1.09)
ssp126	ips1-cm6a-lr_rli1plf1	2060	616282	5492 (4443, 6632)	0.891 (0.721, 1.076)
ssp126	ips1-cm6a-lr_rli1plf1	2070	547459	5311 (4294, 6424)	0.97 (0.784, 1.174)
ssp126	ips1-cm6a-lr_rli1plf1	2080	478495	4458 (3613, 5414)	0.932 (0.755, 1.131)
ssp126	ips1-cm6a-lr_rli1plf1	2090	410081	3563 (2879, 4294)	0.869 (0.702, 1.047)
ssp126	ips1-cm6a-lr_rli1plf1	2100	37251	330 (266, 401)	0.887 (0.714, 1.077)
ssp126	mpi-esm1-2-hr_rli1plf1	2020	793027	4730 (3821, 5717)	0.596 (0.482, 0.721)
ssp126	mpi-esm1-2-hr_rli1plf1	2030	775697	4697 (3789, 5683)	0.605 (0.488, 0.733)
ssp126	mpi-esm1-2-hr_rli1plf1	2040	737140	5321 (4308, 6458)	0.722 (0.584, 0.876)
ssp126	mpi-esm1-2-hr_rli1plf1	2050	681766	4157 (3342, 5019)	0.61 (0.49, 0.736)
ssp126	mpi-esm1-2-hr_rli1plf1	2060	616282	4768 (3815, 5762)	0.774 (0.619, 0.935)
ssp126	mpi-esm1-2-hr_rli1plf1	2070	547459	4188 (3364, 5032)	0.765 (0.614, 0.919)
ssp126	mpi-esm1-2-hr_rli1plf1	2080	478495	3172 (2575, 3813)	0.663 (0.538, 0.797)
ssp126	mpi-esm1-2-hr_rli1plf1	2090	410081	2431 (1955, 2943)	0.593 (0.477, 0.718)
ssp126	mpi-esm1-2-hr_rli1plf1	2100	37251	124 (100, 150)	0.333 (0.269, 0.404)
ssp126	mri-esm2-0_rli1plf1	2020	793027	5078 (4088, 6129)	0.64 (0.515, 0.773)
ssp126	mri-esm2-0_rli1plf1	2030	775697	6910 (5554, 8339)	0.891 (0.716, 1.075)
ssp126	mri-esm2-0_rli1plf1	2040	737140	6727 (5427, 8108)	0.913 (0.736, 1.1)
ssp126	mri-esm2-0_rli1plf1	2050	681766	6630 (5362, 7995)	0.972 (0.786, 1.173)
ssp126	mri-esm2-0_rli1plf1	2060	616282	5494 (4434, 6617)	0.891 (0.72, 1.074)
ssp126	mri-esm2-0_rli1plf1	2070	547459	5604 (4528, 6761)	1.024 (0.827, 1.235)
ssp126	mri-esm2-0_rli1plf1	2080	478495	4392 (3537, 5297)	0.918 (0.739, 1.107)

ssp126	mri-esm2-0_rli1p1f1	2090	410081	3537 (2849, 4272)	0.863 (0.695, 1.042)
ssp126	mri-esm2-0_rli1p1f1	2100	37251	267 (217, 324)	0.717 (0.581, 0.869)
ssp126	ukesm1-0-ll_rli1p1f2	2020	793027	5394 (4365, 6515)	0.68 (0.55, 0.822)
ssp126	ukesm1-0-ll_rli1p1f2	2030	775697	6206 (4998, 7520)	0.8 (0.644, 0.969)
ssp126	ukesm1-0-ll_rli1p1f2	2040	737140	6962 (5627, 8413)	0.944 (0.763, 1.141)
ssp126	ukesm1-0-ll_rli1p1f2	2050	681766	7680 (6199, 9279)	1.127 (0.909, 1.361)
ssp126	ukesm1-0-ll_rli1p1f2	2060	616282	6937 (5593, 8385)	1.126 (0.908, 1.361)
ssp126	ukesm1-0-ll_rli1p1f2	2070	547459	6752 (5436, 8171)	1.233 (0.993, 1.492)
ssp126	ukesm1-0-ll_rli1p1f2	2080	478495	6266 (5058, 7571)	1.31 (1.057, 1.582)
ssp126	ukesm1-0-ll_rli1p1f2	2090	410081	5151 (4153, 6222)	1.256 (1.013, 1.517)
ssp126	ukesm1-0-ll_rli1p1f2	2100	37251	527 (426, 633)	1.415 (1.143, 1.7)
ssp370	gfdl-esm4_rli1p1f1	2020	807779	4918 (3988, 5964)	0.609 (0.494, 0.738)
ssp370	gfdl-esm4_rli1p1f1	2030	803912	5848 (4712, 7087)	0.727 (0.586, 0.882)
ssp370	gfdl-esm4_rli1p1f1	2040	777490	7746 (6252, 9373)	0.996 (0.804, 1.205)
ssp370	gfdl-esm4_rli1p1f1	2050	737595	8437 (6822, 10210)	1.144 (0.925, 1.384)
ssp370	gfdl-esm4_rli1p1f1	2060	693484	9010 (7283, 10925)	1.299 (1.05, 1.575)
ssp370	gfdl-esm4_rli1p1f1	2070	653172	10102 (8155, 12237)	1.547 (1.249, 1.873)
ssp370	gfdl-esm4_rli1p1f1	2080	621146	10792 (8712, 13086)	1.737 (1.402, 2.107)
ssp370	gfdl-esm4_rli1p1f1	2090	601574	11298 (9151, 13734)	1.878 (1.521, 2.283)
ssp370	gfdl-esm4_rli1p1f1	2100	59510	1176 (945, 1433)	1.976 (1.588, 2.409)
ssp370	ipsl-cm6a-lr_rli1p1f1	2020	807779	4674 (3773, 5637)	0.579 (0.467, 0.698)
ssp370	ipsl-cm6a-lr_rli1p1f1	2030	803912	5943 (4794, 7201)	0.739 (0.596, 0.896)
ssp370	ipsl-cm6a-lr_rli1p1f1	2040	777490	7208 (5839, 8737)	0.927 (0.751, 1.124)
ssp370	ipsl-cm6a-lr_rli1p1f1	2050	737595	8338 (6731, 10110)	1.13 (0.913, 1.371)
ssp370	ipsl-cm6a-lr_rli1p1f1	2060	693484	10107 (8175, 12200)	1.457 (1.179, 1.759)
ssp370	ipsl-cm6a-lr_rli1p1f1	2070	653172	11986 (9677, 14483)	1.835 (1.481, 2.217)
ssp370	ipsl-cm6a-lr_rli1p1f1	2080	621146	12589 (10163, 15227)	2.027 (1.636, 2.451)
ssp370	ipsl-cm6a-lr_rli1p1f1	2090	601574	15047 (12158, 18166)	2.501 (2.021, 3.02)
ssp370	ipsl-cm6a-lr_rli1p1f1	2100	59510	1521 (1229, 1842)	2.555 (2.066, 3.095)
ssp370	mpi-esm1-2-hr_rli1p1f1	2020	807779	5083 (4125, 6139)	0.629 (0.511, 0.76)
ssp370	mpi-esm1-2-hr_rli1p1f1	2030	803912	5675 (4578, 6899)	0.706 (0.569, 0.858)
ssp370	mpi-esm1-2-hr_rli1p1f1	2040	777490	6302 (5101, 7644)	0.811 (0.656, 0.983)
ssp370	mpi-esm1-2-hr_rli1p1f1	2050	737595	7231 (5837, 8767)	0.98 (0.791, 1.189)
ssp370	mpi-esm1-2-hr_rli1p1f1	2060	693484	7233 (5851, 8756)	1.043 (0.844, 1.263)
ssp370	mpi-esm1-2-hr_rli1p1f1	2070	653172	8420 (6798, 10189)	1.289 (1.041, 1.56)
ssp370	mpi-esm1-2-hr_rli1p1f1	2080	621146	8142 (6564, 9904)	1.311 (1.057, 1.594)
ssp370	mpi-esm1-2-hr_rli1p1f1	2090	601574	10013 (8093, 12136)	1.664 (1.345, 2.017)
ssp370	mpi-esm1-2-hr_rli1p1f1	2100	59510	1084 (875, 1313)	1.821 (1.471, 2.207)
ssp370	mri-esm2-0_rli1p1f1	2020	807779	5341 (4329, 6446)	0.661 (0.536, 0.798)

ssp370	mri-esm2-0_rli1p1f1	2030	803912	6019 (4857, 7253)	0.749 (0.604, 0.902)
ssp370	mri-esm2-0_rli1p1f1	2040	777490	7255 (5848, 8753)	0.933 (0.752, 1.126)
ssp370	mri-esm2-0_rli1p1f1	2050	737595	7021 (5667, 8484)	0.952 (0.768, 1.15)
ssp370	mri-esm2-0_rli1p1f1	2060	693484	7750 (6241, 9347)	1.118 (0.9, 1.348)
ssp370	mri-esm2-0_rli1p1f1	2070	653172	8665 (7006, 10432)	1.327 (1.073, 1.597)
ssp370	mri-esm2-0_rli1p1f1	2080	621146	9053 (7299, 10933)	1.457 (1.175, 1.76)
ssp370	mri-esm2-0_rli1p1f1	2090	601574	9239 (7451, 11175)	1.536 (1.239, 1.858)
ssp370	mri-esm2-0_rli1p1f1	2100	59510	1011 (817, 1228)	1.699 (1.372, 2.063)
ssp370	ukesm1-0-ll_rli1p1f2	2020	807779	5497 (4437, 6654)	0.68 (0.549, 0.824)
ssp370	ukesm1-0-ll_rli1p1f2	2030	803912	8622 (6991, 10398)	1.073 (0.87, 1.293)
ssp370	ukesm1-0-ll_rli1p1f2	2040	777490	10996 (8854, 13295)	1.414 (1.139, 1.71)
ssp370	ukesm1-0-ll_rli1p1f2	2050	737595	11236 (9066, 13610)	1.523 (1.229, 1.845)
ssp370	ukesm1-0-ll_rli1p1f2	2060	693484	13330 (10753, 16114)	1.922 (1.551, 2.324)
ssp370	ukesm1-0-ll_rli1p1f2	2070	653172	14108 (11376, 17083)	2.16 (1.742, 2.615)
ssp370	ukesm1-0-ll_rli1p1f2	2080	621146	14990 (12085, 18143)	2.413 (1.946, 2.921)
ssp370	ukesm1-0-ll_rli1p1f2	2090	601574	16150 (13029, 19515)	2.685 (2.166, 3.244)
ssp370	ukesm1-0-ll_rli1p1f2	2100	59510	1656 (1338, 2002)	2.783 (2.249, 3.365)
ssp585	gfdl-esm4_rli1p1f1	2020	792881	4656 (3756, 5624)	0.587 (0.474, 0.709)
ssp585	gfdl-esm4_rli1p1f1	2030	775559	5947 (4785, 7195)	0.767 (0.617, 0.928)
ssp585	gfdl-esm4_rli1p1f1	2040	737125	6998 (5642, 8486)	0.949 (0.765, 1.151)
ssp585	gfdl-esm4_rli1p1f1	2050	681943	8492 (6824, 10302)	1.245 (1.001, 1.511)
ssp585	gfdl-esm4_rli1p1f1	2060	616620	8789 (7069, 10678)	1.425 (1.146, 1.732)
ssp585	gfdl-esm4_rli1p1f1	2070	547899	8770 (7059, 10662)	1.601 (1.288, 1.946)
ssp585	gfdl-esm4_rli1p1f1	2080	479006	9102 (7343, 11037)	1.9 (1.533, 2.304)
ssp585	gfdl-esm4_rli1p1f1	2090	410646	8990 (7265, 10888)	2.189 (1.769, 2.651)
ssp585	gfdl-esm4_rli1p1f1	2100	37310	896 (723, 1082)	2.401 (1.937, 2.9)
ssp585	ipsl-cm6a-lr_rli1p1f1	2020	792881	4540 (3664, 5485)	0.573 (0.462, 0.692)
ssp585	ipsl-cm6a-lr_rli1p1f1	2030	775559	5194 (4186, 6286)	0.67 (0.54, 0.81)
ssp585	ipsl-cm6a-lr_rli1p1f1	2040	737125	7471 (6040, 9025)	1.013 (0.819, 1.224)
ssp585	ipsl-cm6a-lr_rli1p1f1	2050	681943	9334 (7530, 11261)	1.369 (1.104, 1.651)
ssp585	ipsl-cm6a-lr_rli1p1f1	2060	616620	10863 (8776, 13121)	1.762 (1.423, 2.128)
ssp585	ipsl-cm6a-lr_rli1p1f1	2070	547899	11144 (9024, 13469)	2.034 (1.647, 2.458)
ssp585	ipsl-cm6a-lr_rli1p1f1	2080	479006	12064 (9743, 14581)	2.518 (2.034, 3.044)
ssp585	ipsl-cm6a-lr_rli1p1f1	2090	410646	11589 (9364, 13994)	2.822 (2.28, 3.408)
ssp585	ipsl-cm6a-lr_rli1p1f1	2100	37310	1126 (911, 1359)	3.018 (2.442, 3.643)
ssp585	mpi-esm1-2-hr_rli1p1f1	2020	792881	5115 (4126, 6166)	0.645 (0.52, 0.778)
ssp585	mpi-esm1-2-hr_rli1p1f1	2030	775559	6248 (5024, 7553)	0.806 (0.648, 0.974)
ssp585	mpi-esm1-2-hr_rli1p1f1	2040	737125	6639 (5355, 8031)	0.901 (0.727, 1.09)
ssp585	mpi-esm1-2-hr_rli1p1f1	2050	681943	7576 (6101, 9158)	1.111 (0.895, 1.343)

ssp585	mpi-esm1-2-hr_rli1p1f1	2060	616620	8732 (7050, 10559)	1.416 (1.143, 1.712)
ssp585	mpi-esm1-2-hr_rli1p1f1	2070	547899	8552 (6900, 10354)	1.561 (1.259, 1.89)
ssp585	mpi-esm1-2-hr_rli1p1f1	2080	479006	8357 (6754, 10150)	1.745 (1.41, 2.119)
ssp585	mpi-esm1-2-hr_rli1p1f1	2090	410646	8472 (6852, 10260)	2.063 (1.668, 2.499)
ssp585	mpi-esm1-2-hr_rli1p1f1	2100	37310	846 (681, 1025)	2.266 (1.826, 2.747)
ssp585	mri-esm2-0_rli1p1f1	2020	792881	5691 (4611, 6852)	0.718 (0.582, 0.864)
ssp585	mri-esm2-0_rli1p1f1	2030	775559	6572 (5301, 7947)	0.847 (0.684, 1.025)
ssp585	mri-esm2-0_rli1p1f1	2040	737125	7849 (6336, 9463)	1.065 (0.859, 1.284)
ssp585	mri-esm2-0_rli1p1f1	2050	681943	8011 (6473, 9672)	1.175 (0.949, 1.418)
ssp585	mri-esm2-0_rli1p1f1	2060	616620	8820 (7125, 10656)	1.43 (1.155, 1.728)
ssp585	mri-esm2-0_rli1p1f1	2070	547899	9253 (7454, 11173)	1.689 (1.36, 2.039)
ssp585	mri-esm2-0_rli1p1f1	2080	479006	9132 (7368, 11022)	1.907 (1.538, 2.301)
ssp585	mri-esm2-0_rli1p1f1	2090	410646	8739 (7055, 10547)	2.128 (1.718, 2.568)
ssp585	mri-esm2-0_rli1p1f1	2100	37310	880 (709, 1065)	2.36 (1.901, 2.854)
ssp585	ukesm1-0-ll_rli1p1f2	2020	792881	5551 (4480, 6689)	0.7 (0.565, 0.844)
ssp585	ukesm1-0-ll_rli1p1f2	2030	775559	8152 (6600, 9845)	1.051 (0.851, 1.269)
ssp585	ukesm1-0-ll_rli1p1f2	2040	737125	9475 (7641, 11435)	1.285 (1.037, 1.551)
ssp585	ukesm1-0-ll_rli1p1f2	2050	681943	12628 (10178, 15272)	1.852 (1.493, 2.239)
ssp585	ukesm1-0-ll_rli1p1f2	2060	616620	14096 (11364, 17044)	2.286 (1.843, 2.764)
ssp585	ukesm1-0-ll_rli1p1f2	2070	547899	13839 (11150, 16728)	2.526 (2.035, 3.053)
ssp585	ukesm1-0-ll_rli1p1f2	2080	479006	13409 (10813, 16196)	2.799 (2.257, 3.381)
ssp585	ukesm1-0-ll_rli1p1f2	2090	410646	12327 (9961, 14888)	3.002 (2.426, 3.625)
ssp585	ukesm1-0-ll_rli1p1f2	2100	37310	1144 (924, 1379)	3.065 (2.475, 3.697)