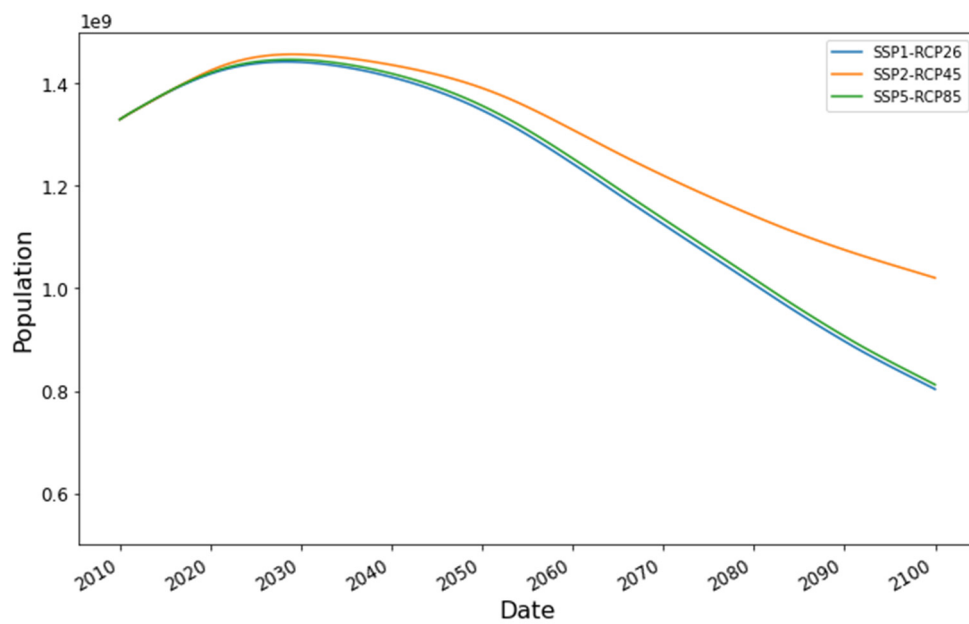


**Figure S1.** Spatial distribution of population at  $0.25^\circ \times 0.25^\circ$  grid cells. (a) is LansScan at present. (b) is Tsinghua population at 1.5 C° warming scenarios. (c) is Tsinghua population at 2.0 C° warming scenarios. Only grid cells with population over 500 are plotted.



**Figure S2.** Dynamics of projected total population in China.

**Table S1.** Overview of twenty CMIP6 models used in this study.

<b>Model</b>	<b>Native Resolution (lat × lon)</b>	<b>Institution</b>
ACCESS-CM2	144 × 192	Commonwealth Scientific and Industrial Research Organisation, Research Council Centre of Excellence for Climate System Science, Australia
ACCESS-ESM1-5	145 × 192	Commonwealth Scientific and Industrial Research Organisation, Australia
CanESM5	64 × 128	Canadian Centre for Climate Modelling and Analysis, Canada
CMCC-ESM2	192 × 288	Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici, Italy
EC-Earth3	256 × 512	EC-Earth-Consortium, Europe
EC-Earth3-Veg	256 × 512	EC-Earth-Consortium, Europe
EC-Earth3-Veg-LR	160 × 320	EC-Earth-Consortium, Europe
FGOALS-g3	80 × 180	Chinese Academy of Sciences, China
GFDL-ESM4	180 × 288	National Oceanic and Atmospheric Administration, Geophysical Fluid Dynamics Laboratory, USA
INM-CM4-8	120 × 180	Institute for Numerical Mathematics, Russian Academy of Science, Russia
INM-CM5-0	120 × 180	Institute for Numerical Mathematics, Russian Academy of Science, Russia
IPSL-CM6A-LR	143 × 144	Institut Pierre Simon Laplace, France
KACE-1-0-G	144 × 192	National Institute of Meteorological Sciences/Korea Meteorological Administration, Republic of Korea
MIROC6	128 × 256	Model for Interdisciplinary Research on Climate (MIROC), Japan
MPI-ESM1-2-HR	192 × 384	Deutsches Klimarechenzentrum , Germany
MPI-ESM1-2-LR	96 × 192	Max Planck Institute for Meteorology, Germany
MRI-ESM2-0	160 × 320	Meteorological Research Institute, Japan
NorESM2-LM	96 × 144	Norwegian Earth System Model version 2 (NorESM2) Climate modeling Consortium (NCC), Norway
NorESM2-MM	192 × 288	NCC, Norway
TaiESM1	192 × 288	Research Center for Environmental Changes, Taiwan, China